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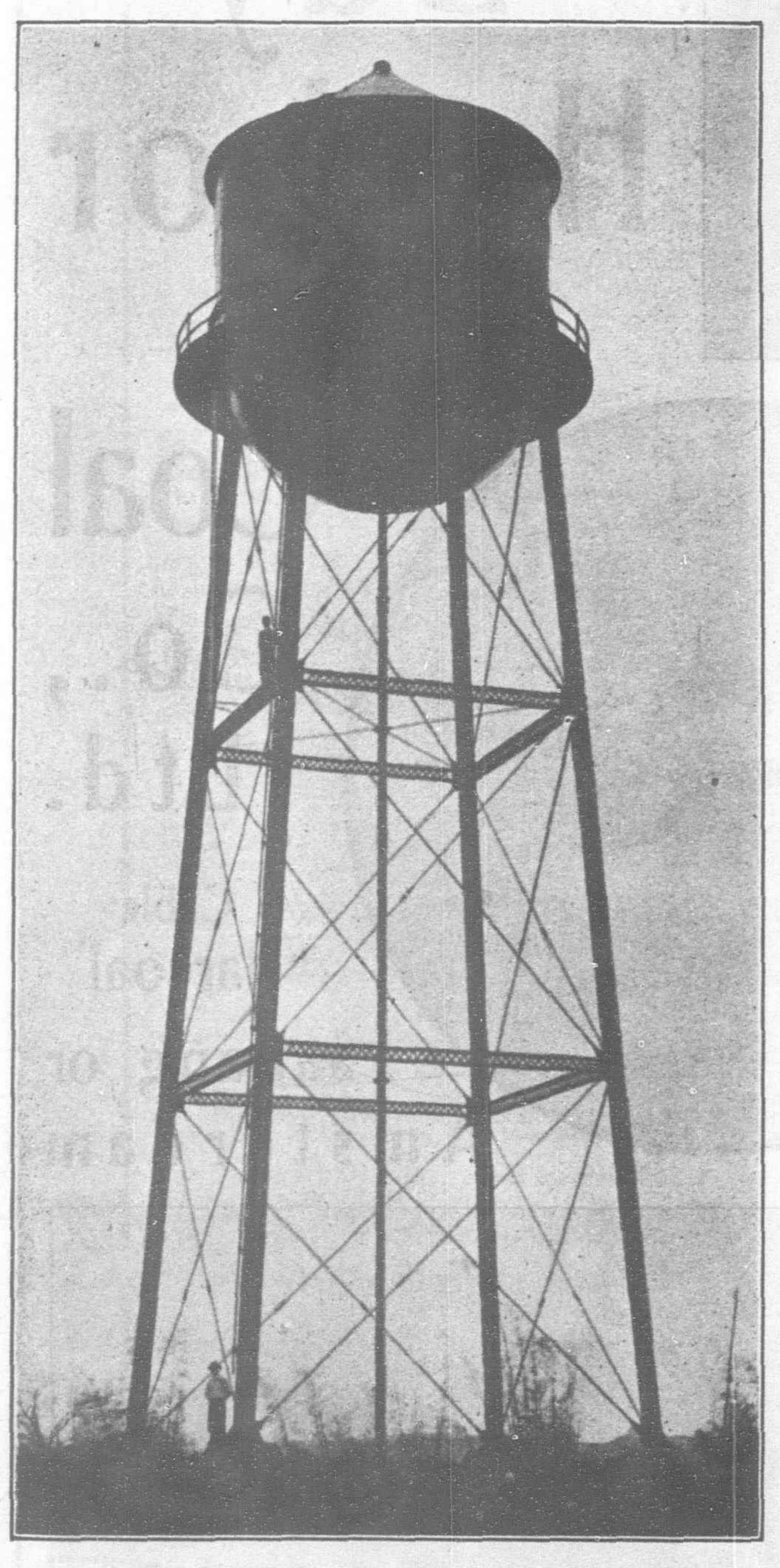
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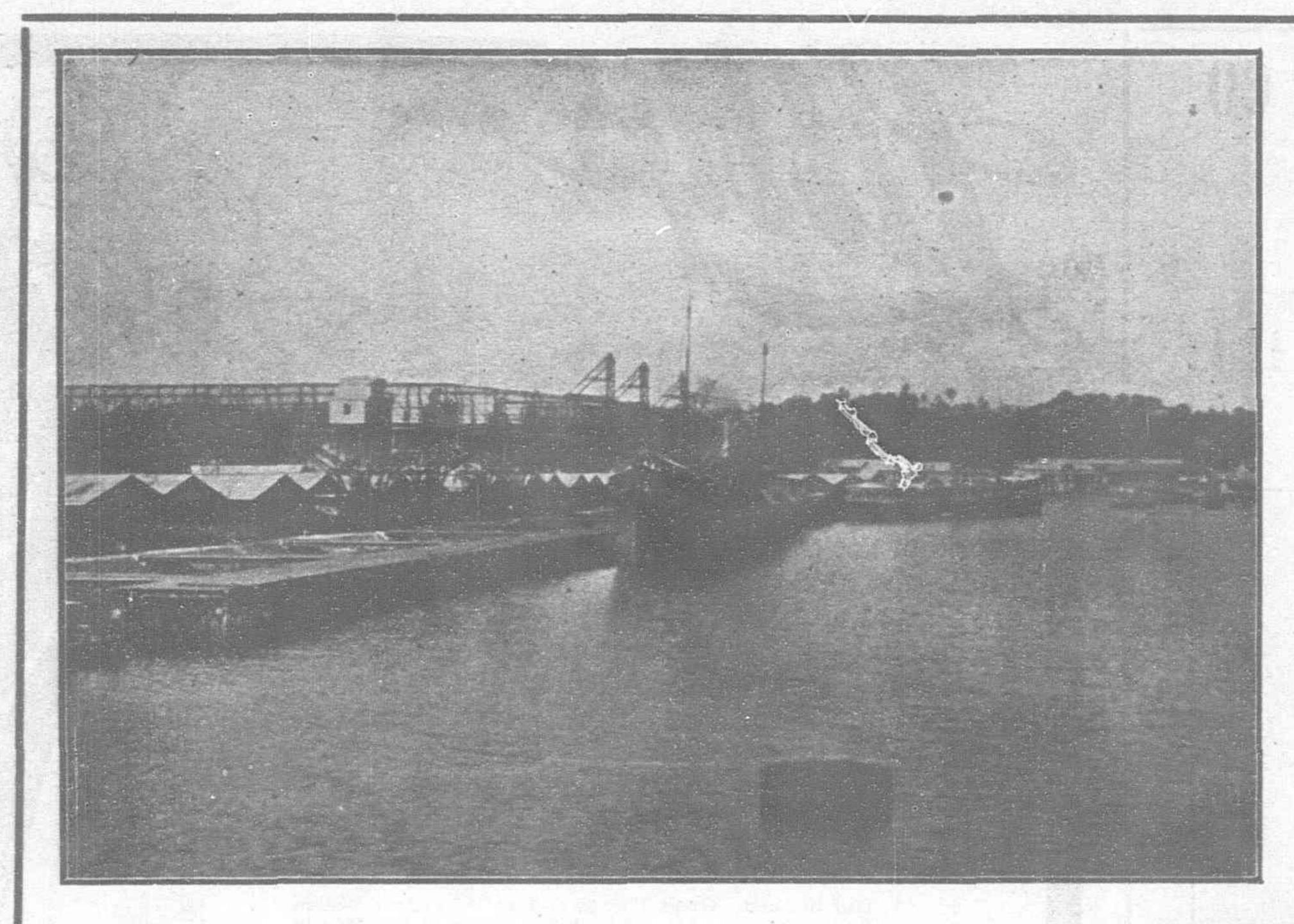


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LOW TIDE DEPTH OF WATER AT WHARVES, 30 FEET

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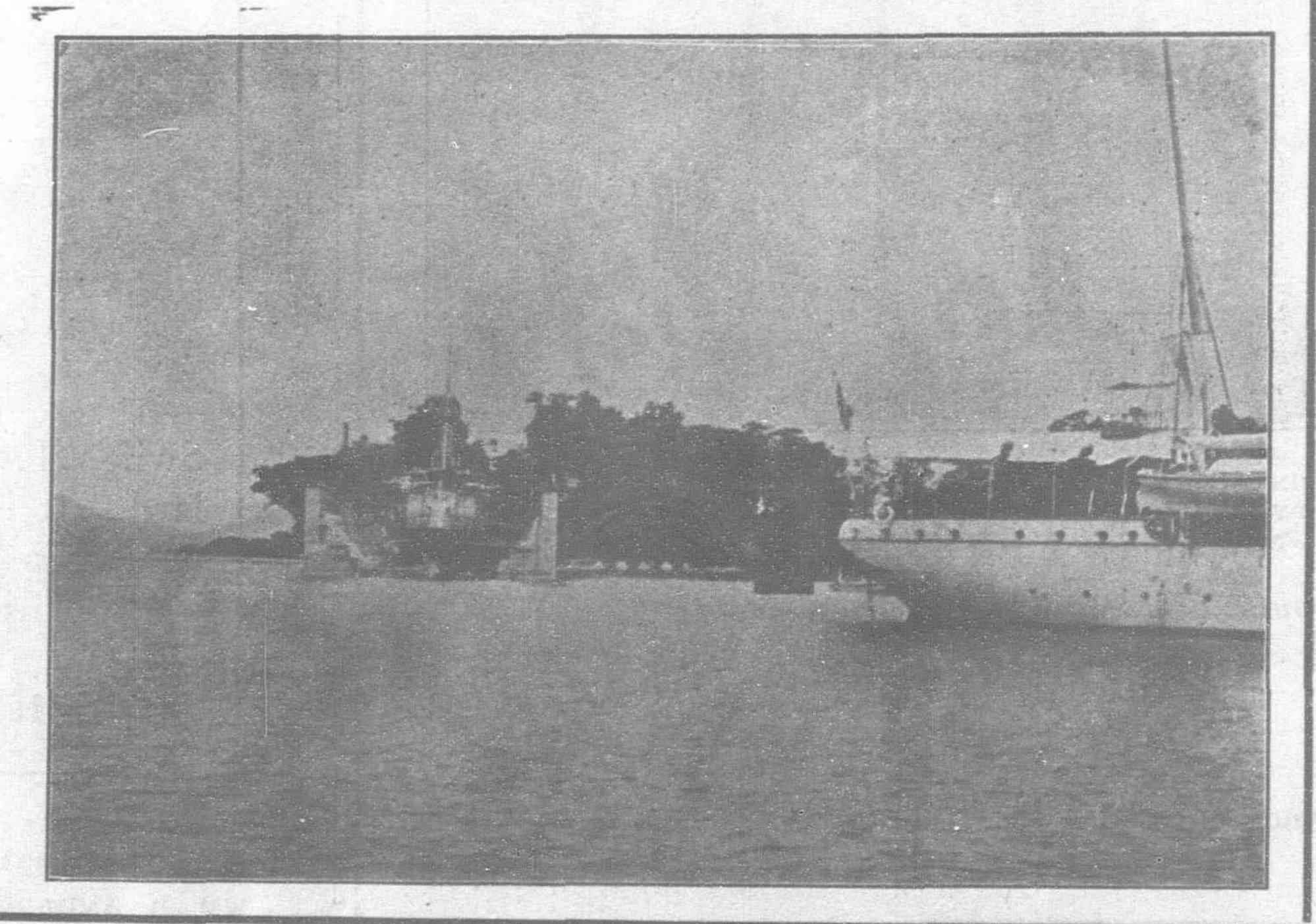
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... HONGKONG ...

THE COMPANY'S DOCKS at KOWLOON, TAI-KOK-TSUI and ABERDEEN are in efficient working order, and the attention of Captains and Shipowners is respectfully solicited to the advantages which these Establishments offer for Docking and Repairing Vessels.

The Company has SIX GRANITE DOCKS and TWO PATENT SLIPS of the following dimensions:-

NAME OF DOOR OF STIP	LENGTHON	ODEA DEST. A ST. TRANSPORT A MORE	DEPTH OVER SILL	RISE OF TIDE		
NAME OF DOCK OR SLIP	KEEL BLOCKS	BREADTH AT ENTRANCE	AT ORDINARY SPRING TIDES	SPRINGS	NEAPS	
KOWLOON	Feet.	Feet.	Feet.	Feet.	Feet.	
No. 1 Dock, Kowloon	576	1.86 feet top 1 70 ft. bottom	30'	7' 6"	3	
No. 2 Dock, Kowloon	371	74'	18' 6"	7' 6"	_	
No. 3 Dock, Kowloon	264	49' 3" 60'	14'	7' 6"		
Patent Slip, No. 1, Kowloon	240		14'	7' 6"	-	
Patent Slip, No. 2, Kowloon	220	60'	12'	7' 6"		
TAI-KOK-TSUI						
Cosmopolitan Dock	466	85' 6"	20'	7' 6"		
ABERDEEN						
Hope Dock	430	84'	23'	7' 6"		
Lamont Dock	333	64'	16'	7' 6"		

The DOCKS are fitted with every appliance in the way of Caissons, powerful Centrifugal Steam Pumps, etc., which enable them to be pumped out in three hours.

WORKSHOPS.—The extensive workshops on the premises at Kowloon, Cosmopolitan, and Aberdeen Docks possess every facility and appliance necessary for the repairs of ships and steam machinery. The Engineers' Shops are supplied with a large plant of the latest types of tools in the way of Lathes, Planing, Milling and Screwing Machines, Electric Cranes, etc., etc., and capable of executing the largest class of work with despatch. The Shipwrights' Department has attached to it a Steam-Sawmill with Circular, Vertical and Band Saws, and also a complete plant of Wood-working Machinery of the most modern and improved type. The Blacksmiths' Shops are equally well furnished with a complete supply of powerful Steam Hammers, Cranes, etc., capable of forging stern posts and crank and straight shafting of the largest size.

Powerful Lifting Shears with steam purchase at two of their Establishments stand on a solid granite seawall, alongside which vessels can lie drawing 24 feet of water, and take in or out boilers, etc. The Shears at Kowloon are capable of lifting 70 tons.

The Company is prepared to tender for the construction of new vessels in either steel, iron or wood, having already built about 400 of varying sizes up to 3,000 tons; also to execute all kinds of ship work at lower rates and with greater despatch than any establishment in the

East. Every department is under the close supervision of experienced European foremen.

SHIP-YARD is fully equipped with modern plant, including hydraulic flanging and bending machines, electrically driven rolls, punching, shearing, angle-bevelling, joggling and planing machines, capable of dealing with the heaviest class of work.

BOILER-MAKERS' DEPARTMENT.—The Company, in addition to executing repairs, is prepared to tender for new boilers to steamships for the construction of which it possesses special facilities, including powerful punching and shearing machines, hydraulic rivetters, etc.

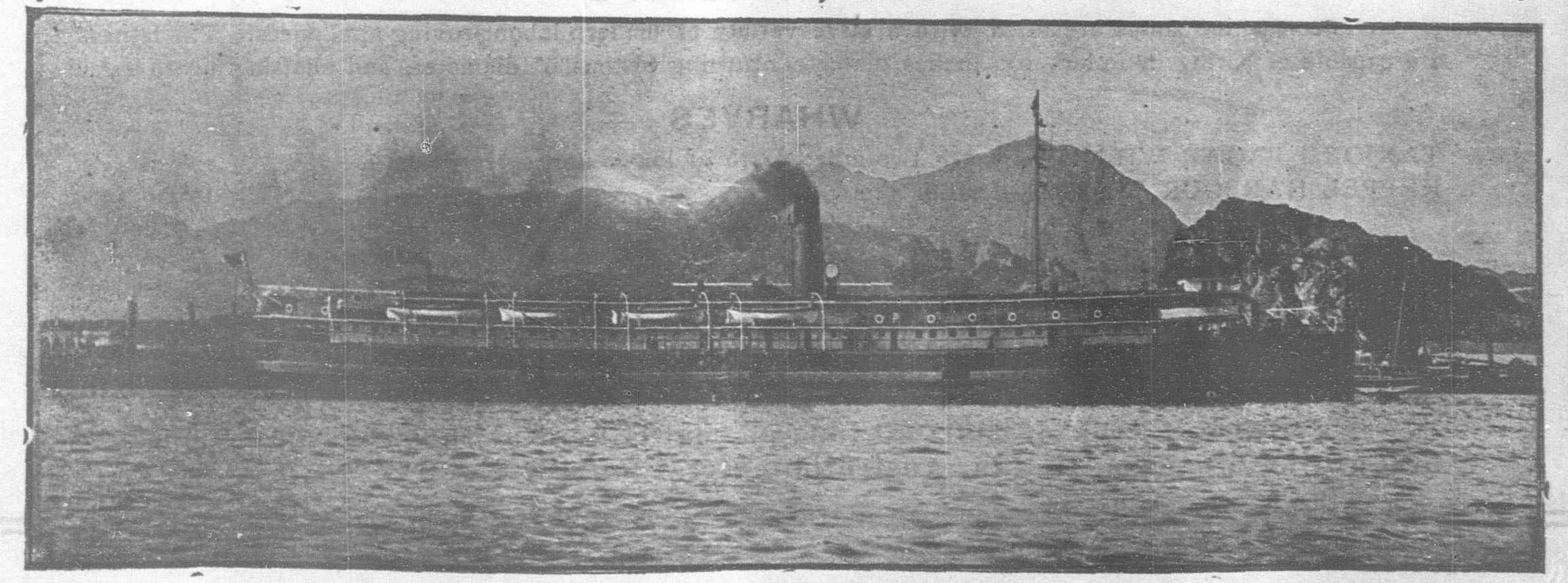
FOUNDRY.—The Foundry is fitted with a large, powerful Steam Crane and the Cupolas are capable of casting up to 100 tons. The Company is prepared to supply the very best Iron and Brass Castings of all descriptions upon the shortest notice.

GALVANIZING PLANT of the most modern type by electrical deposit has been put up at the Kowloon Establishment, which is capable of doing the largest class of work.

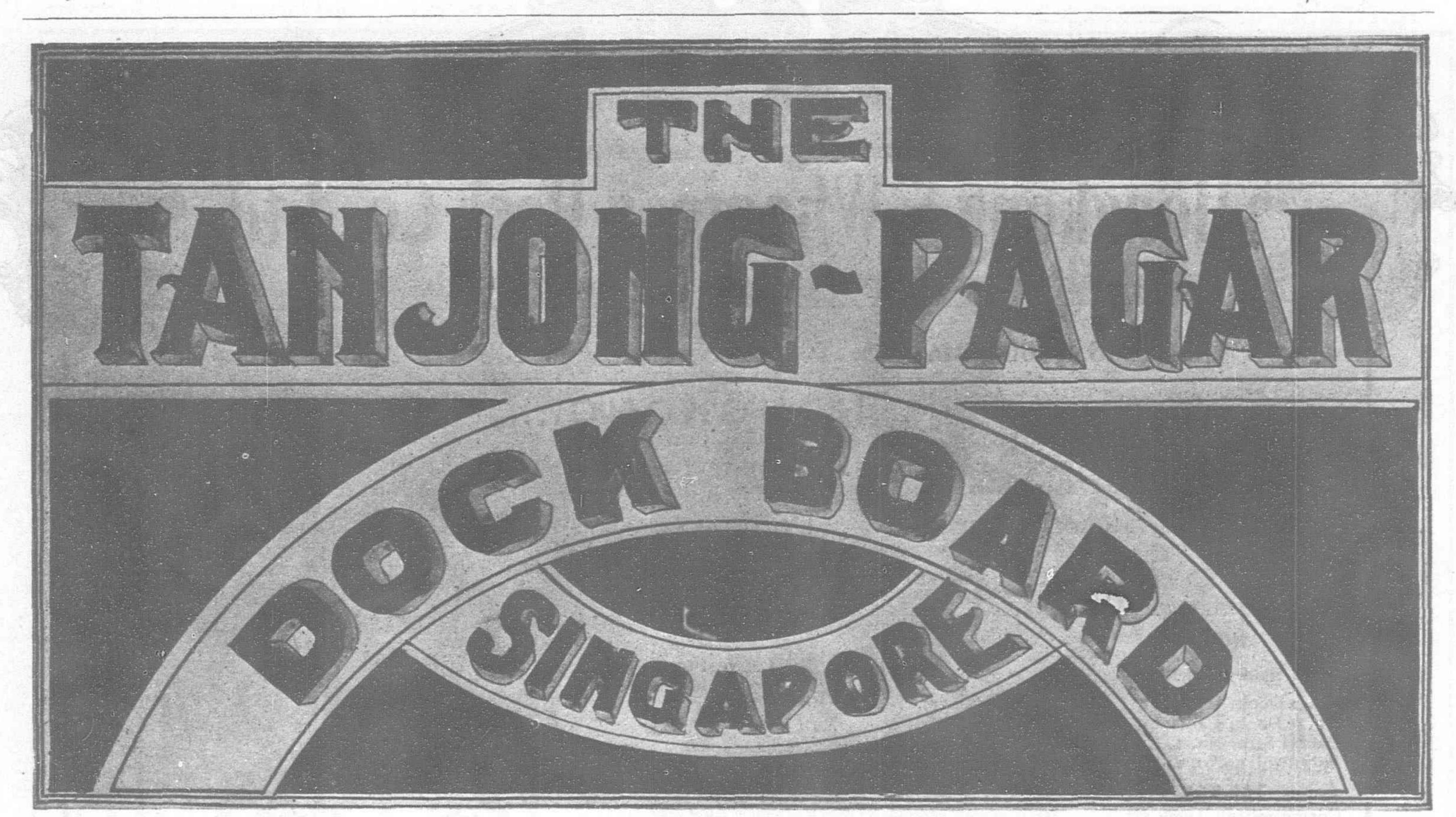
STORES.—The Company's Godowns contain large and well-selected stocks of all material and fittings requisite in shipbuilding, engine-room outfits, furnishings, and ships' stores of all descriptions supplied at tariff rates.

For Further Particulars apply at the Offices of the Company, Queen's Buildings, No. 1, New Praya, Hongkong, or to

FINDLAY & CO., Agents, Manila, P. I.



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Engineers, Shipbuilders and Ship Repairers, Boilermakers, Iron and Brass Founders, Wharfingers, etc.

GRAVING DOCKS

	LENGTH	ENTRANCE	ON SILL HIGHEST SPRING TIDES
VICTORIA GRAVING DOCK	450'		
ALBERT GRAVING DOCK	480"		20"
NO. I. GRAVING DOCK	415'		
NO. 2. GRAVING DOCK	444"		
NEW DOCK (In Preparation)	860"		

SHIPBUILDING YARDS

Are suitable for building steel, iron, composite or wooden vessels of any size, and the Company will furnish plans, specifications, and all requisite information on application. There are a number of steel launches always in course of construction, ready for completion at short notice.

MACHINE SHOPS

The machine shops are fitted with a large variety of modern labour-saving appliances. The lathes are capable of boring cylinders 100 inches diameter, turning pistons 9' diameter, and shafting up to 45'.

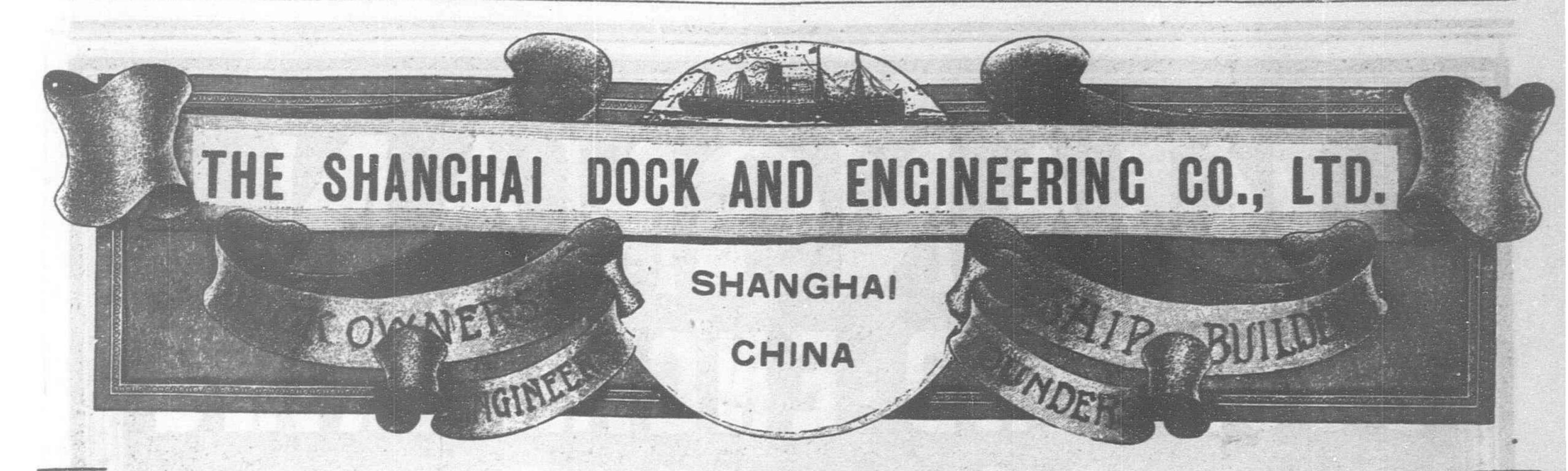
WHARVES

TANJONG PAGAR WHARF-Length two mile; depth at low water, spring tides	20"	to 45'
THE		to 26'

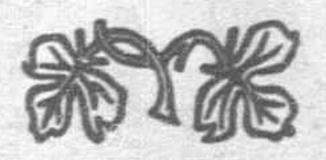
Powerful sheers and cranes for lifting boilers, etc. (45 tons). Extensive godowns, capacity 300,000 tons.

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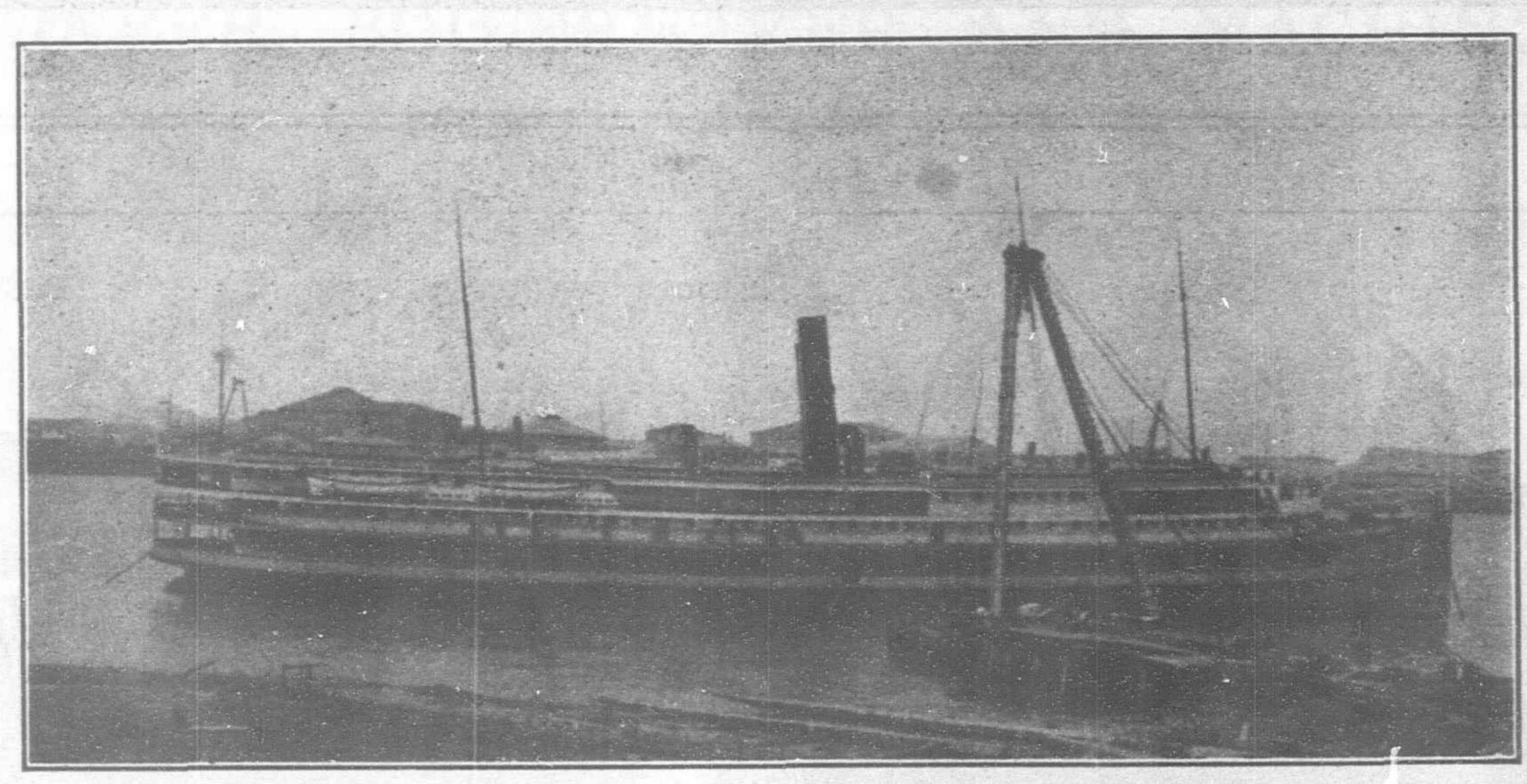
An average stock of 200,000 tons of coal is kept at the wharves consisting of Cardiff, Japanese, Indian, Australian, etc.



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THE DOCKS

The Docks are five in number, ranging in length from 360 feet to 560 feet, and breadth of entrance from 57 feet to 83 feet, with the depth of water on the sill from 16 feet to 24 feet.

The Dock charges are very moderate.

The Water Frontage is about 1½ miles in length. Wharves and Pontoons are arranged where steamers can moor during repairs; and slips for hauling up small vessels are provided. Sheer legs capable of lifting 65 tons are placed at the various Docks.

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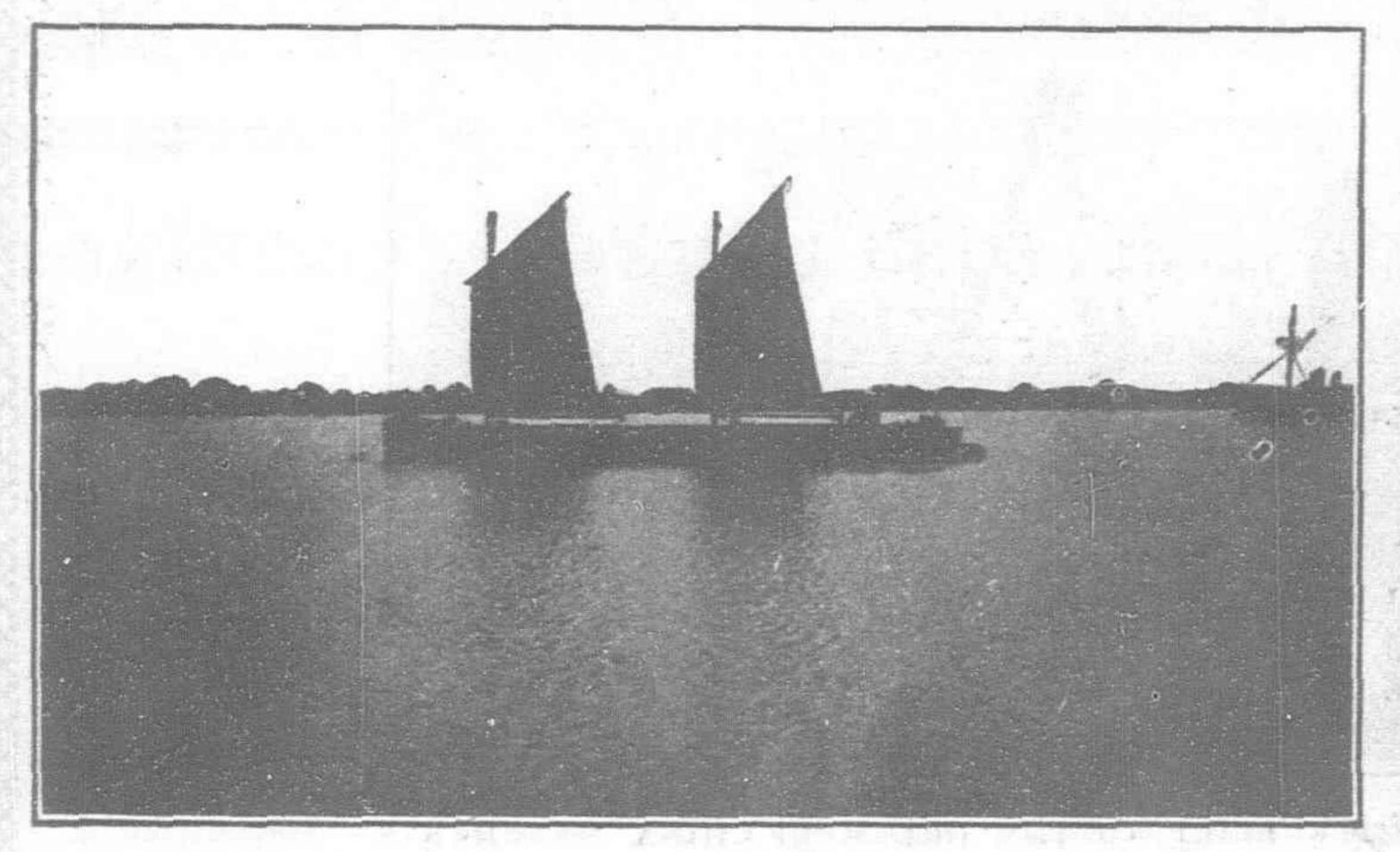
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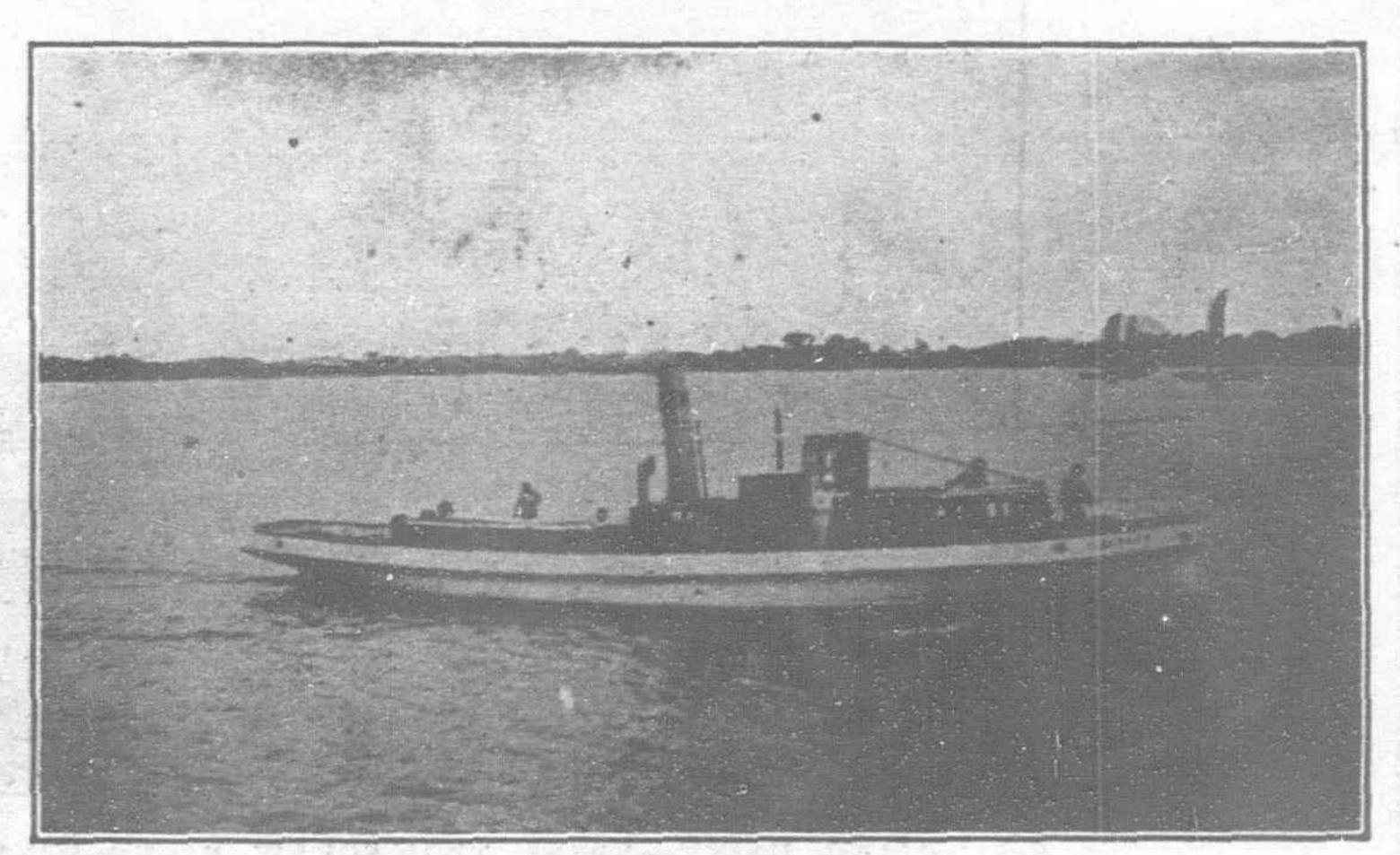
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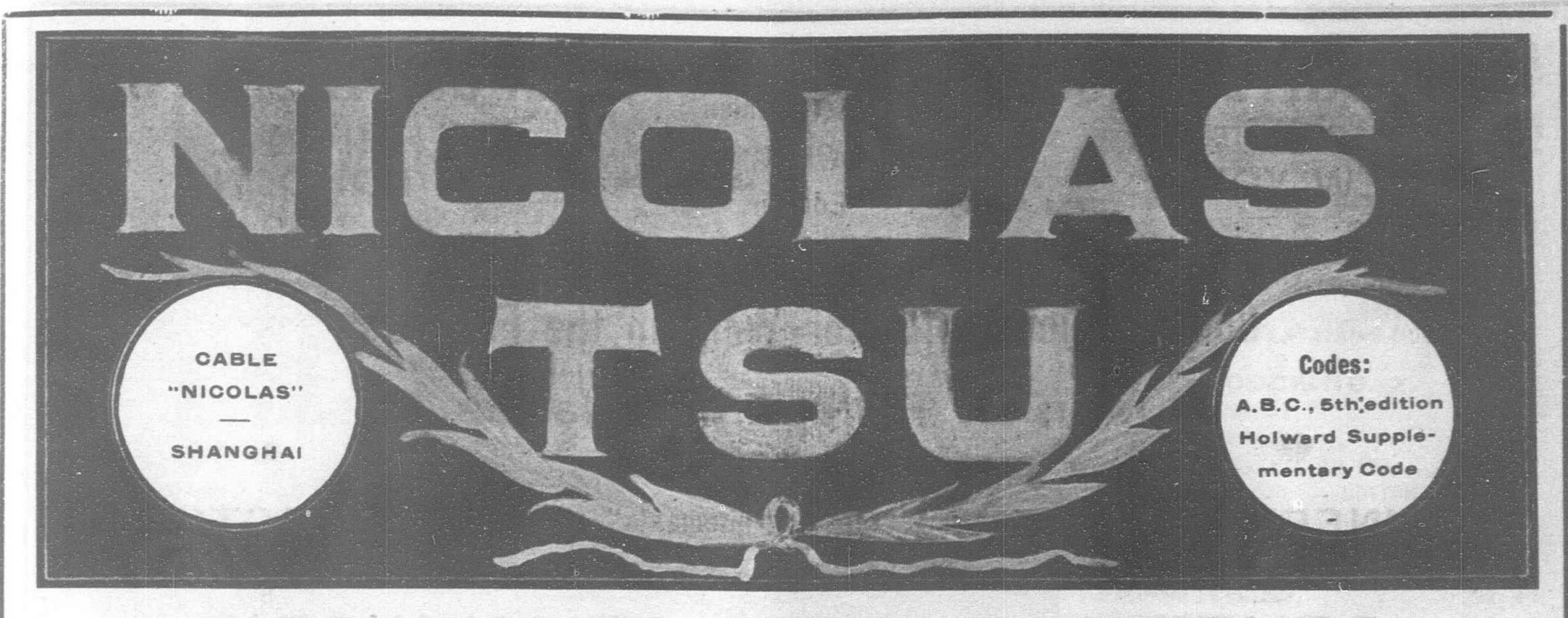
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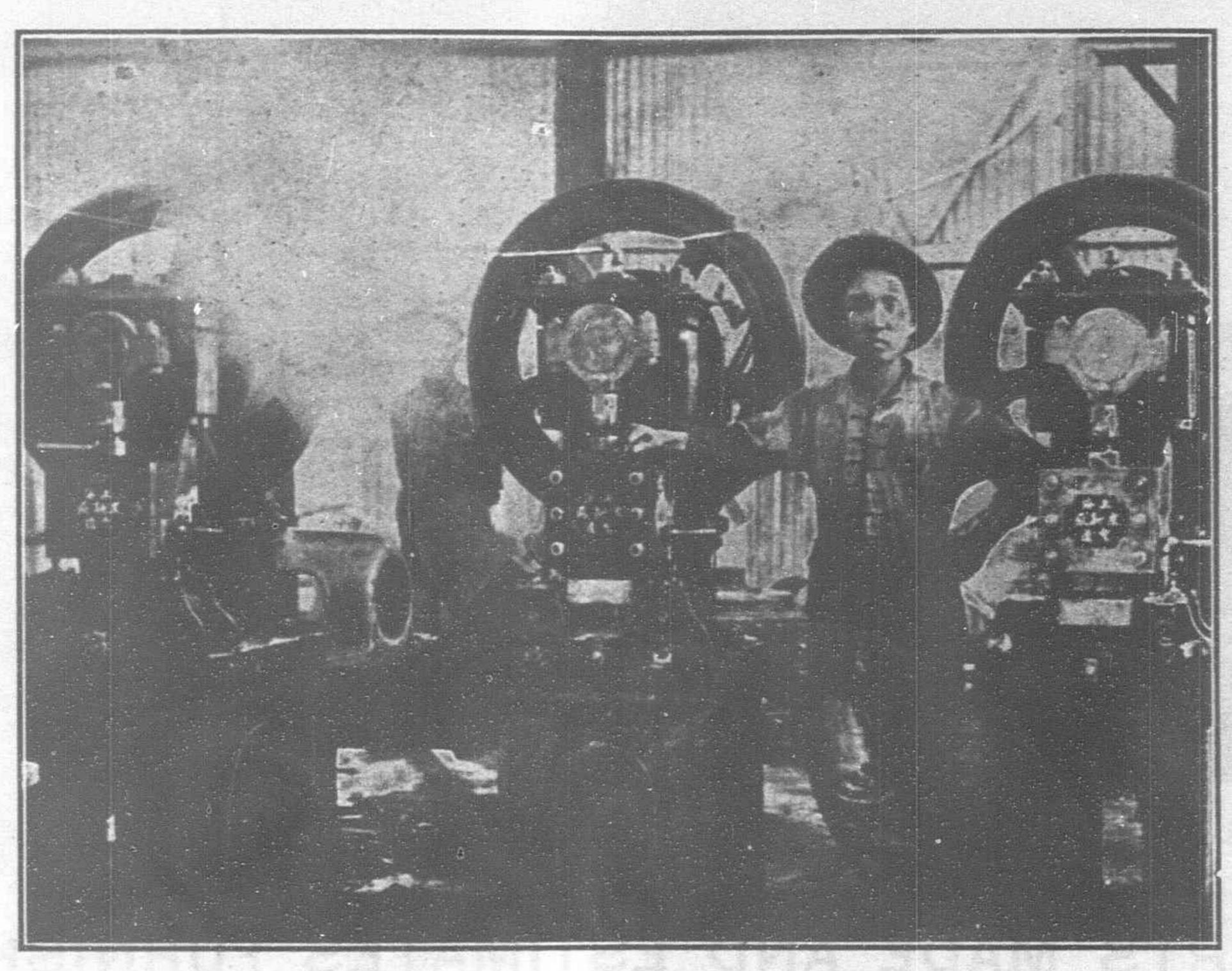
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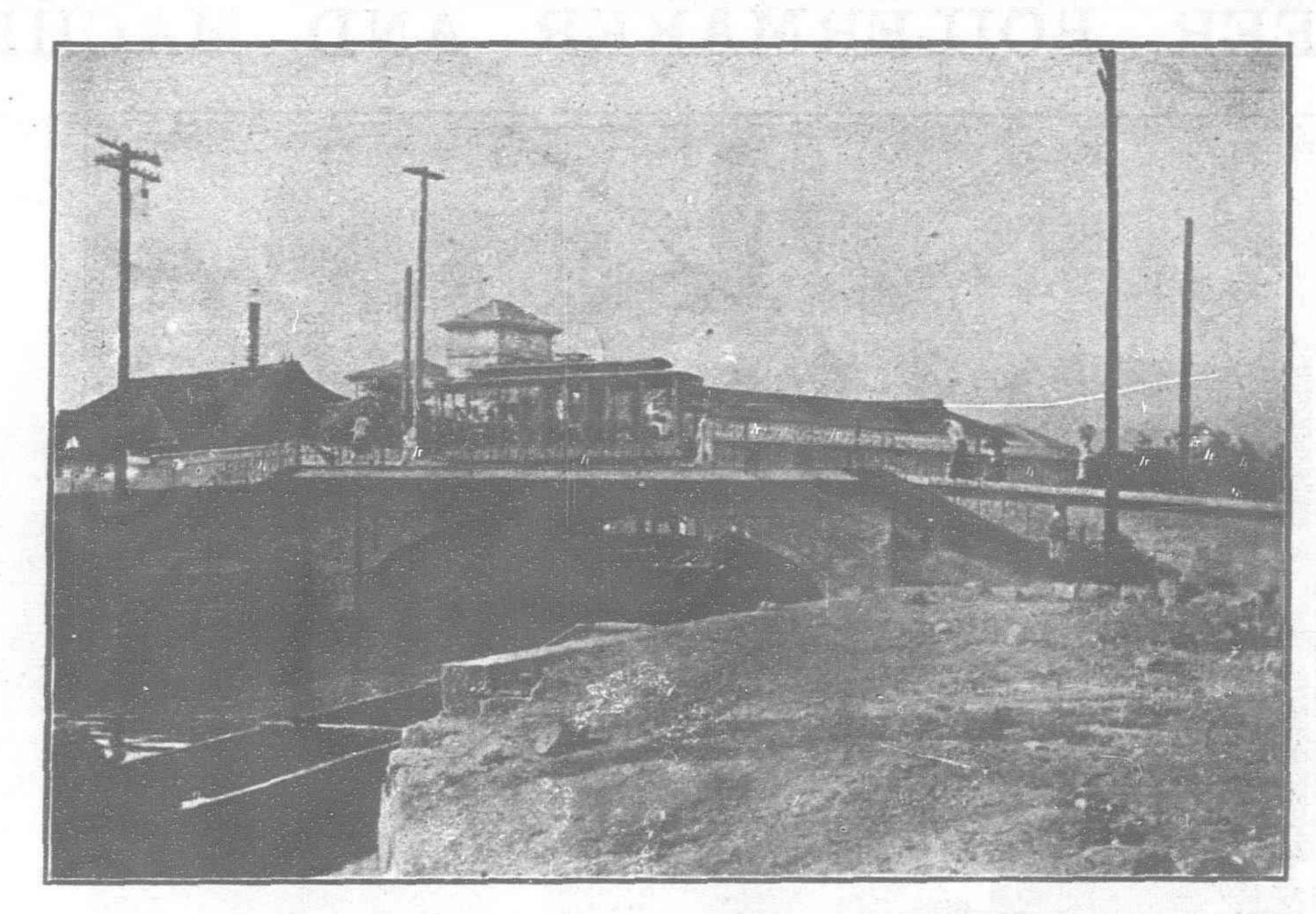
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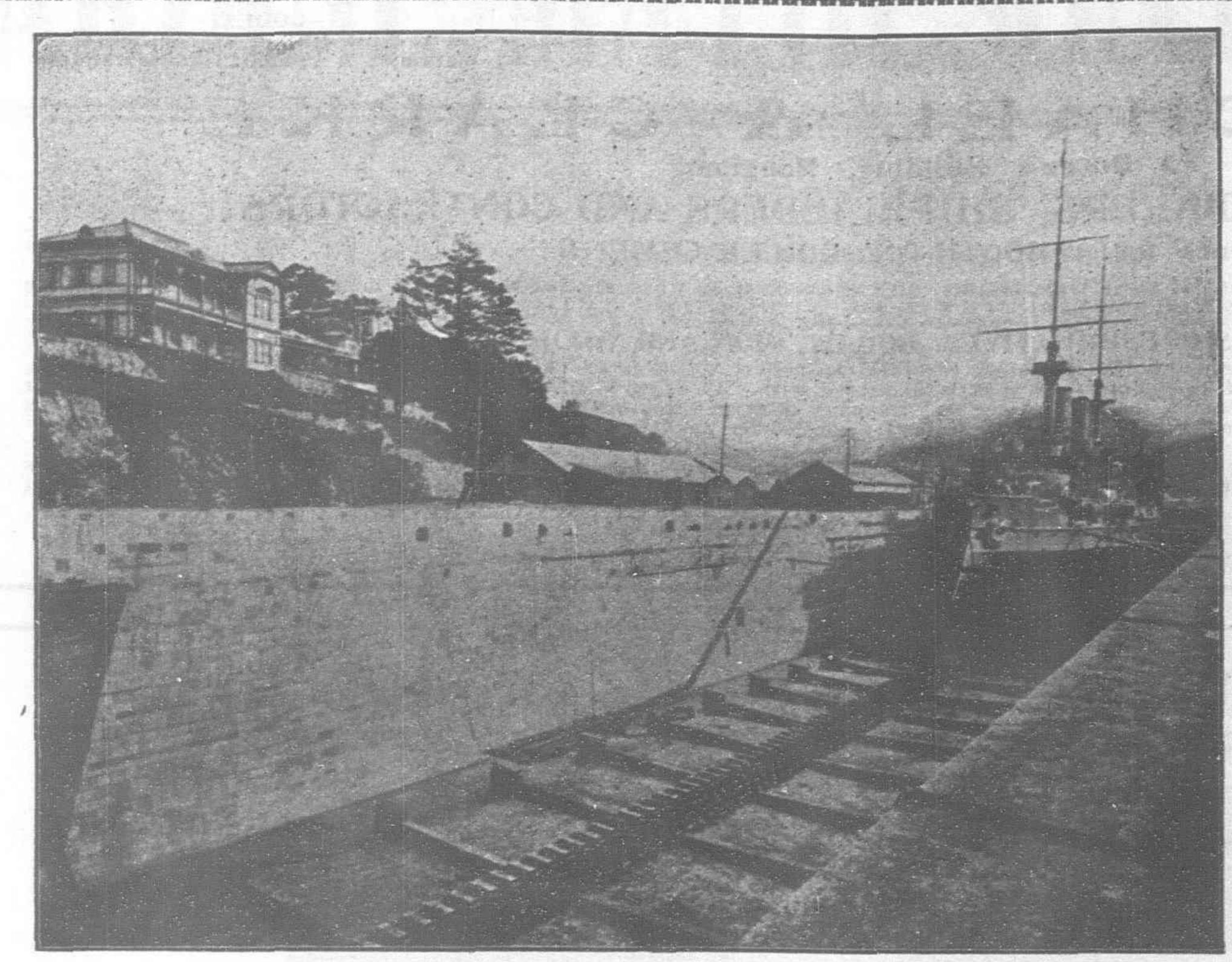
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DOTTO!	
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DOCK NO. 2.	
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LENGTH ON BLOCKS 360	**
WIDTH OF ENTRANCE ON TOP 66	
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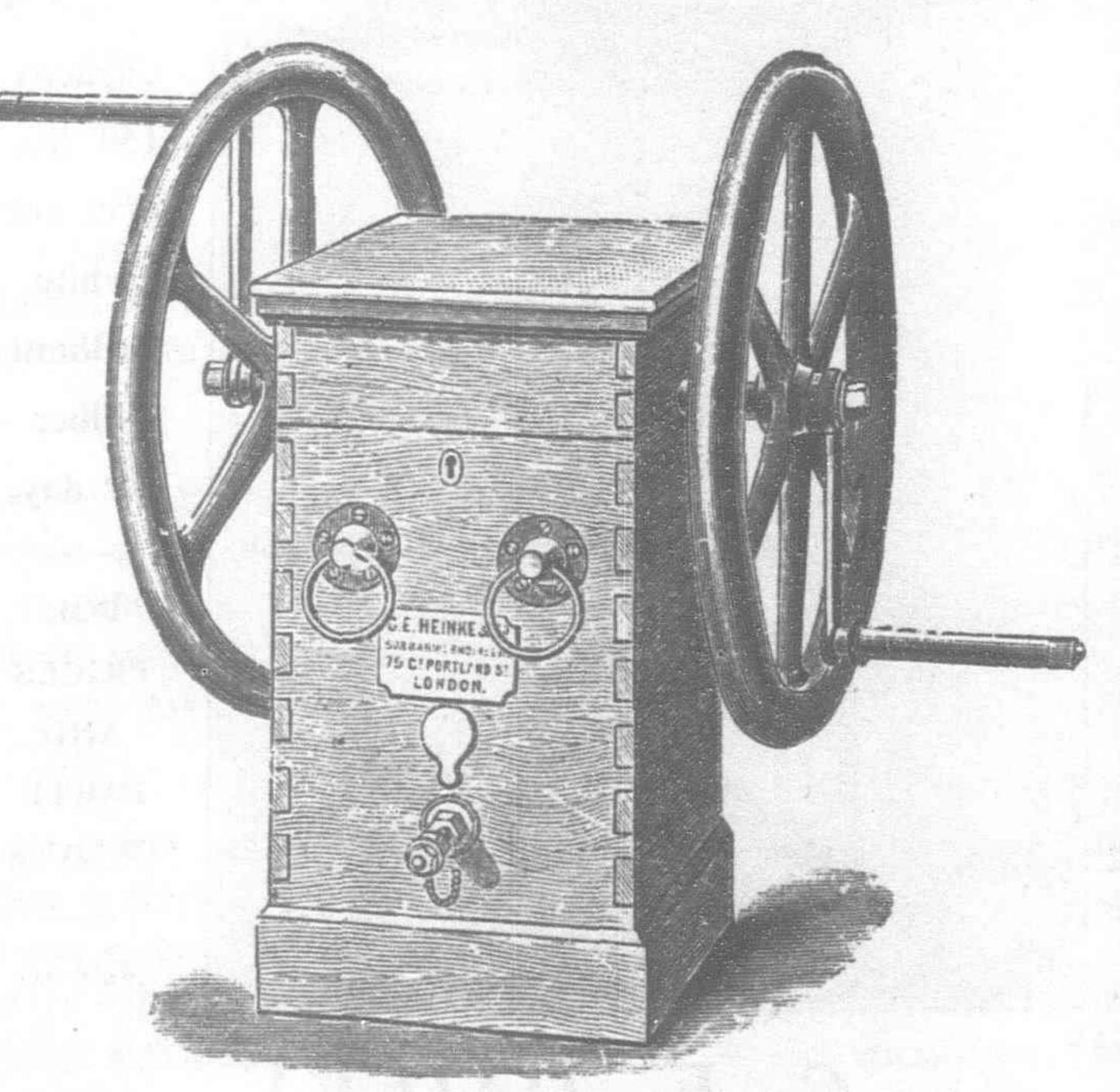
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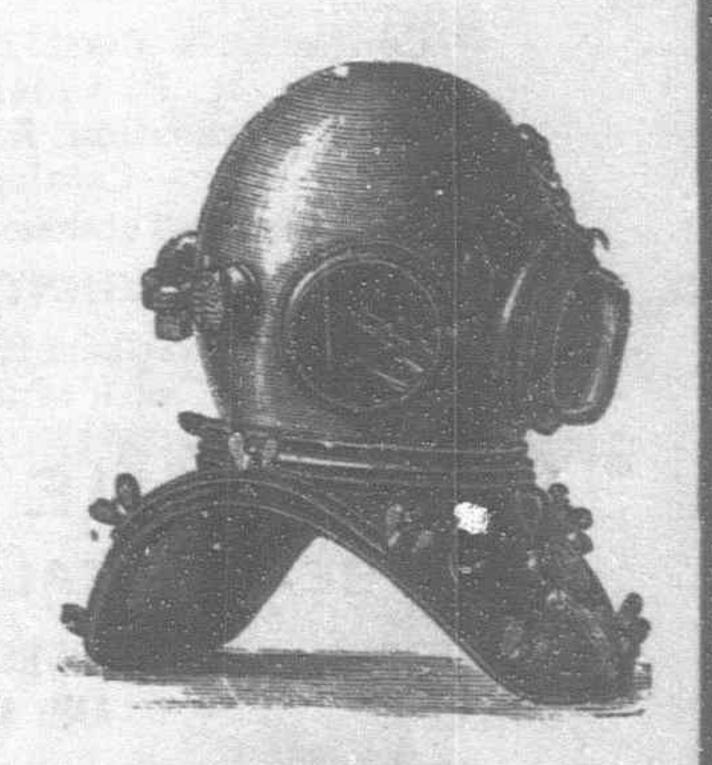


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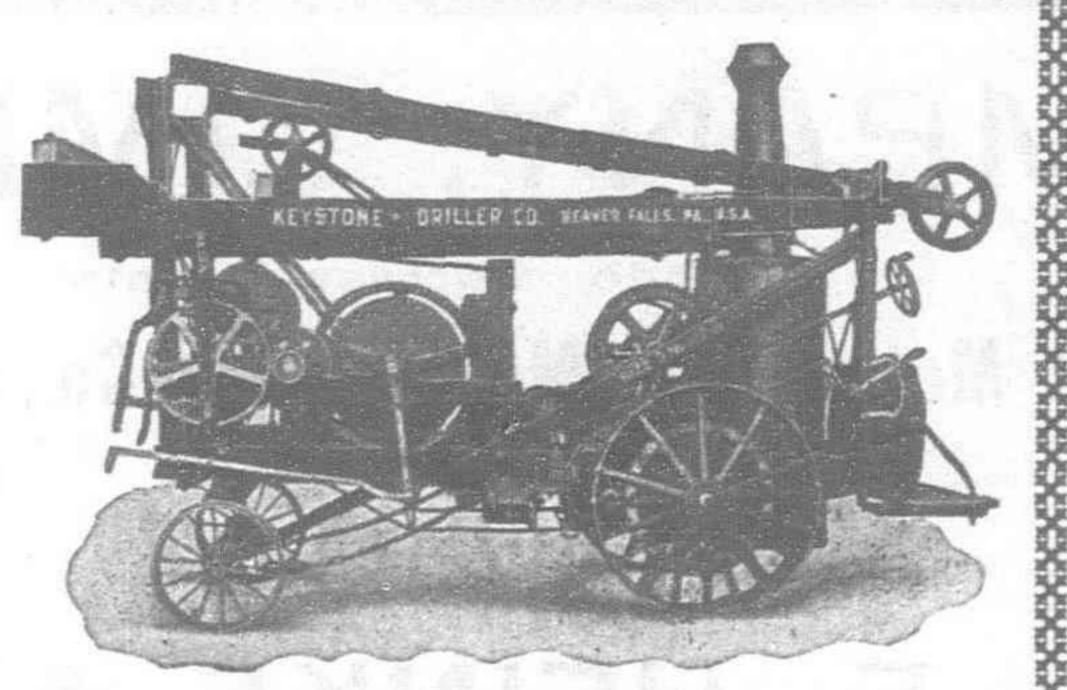
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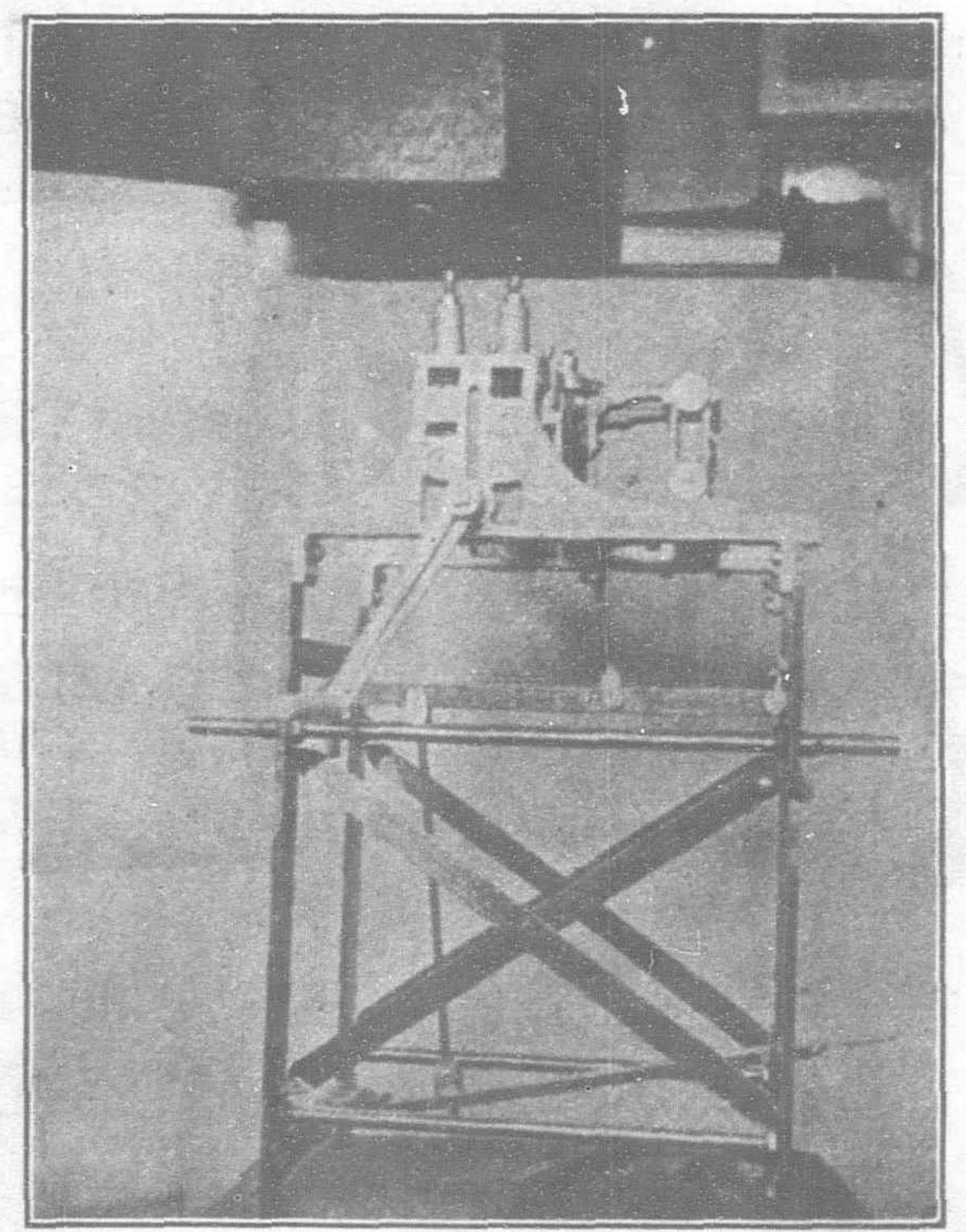
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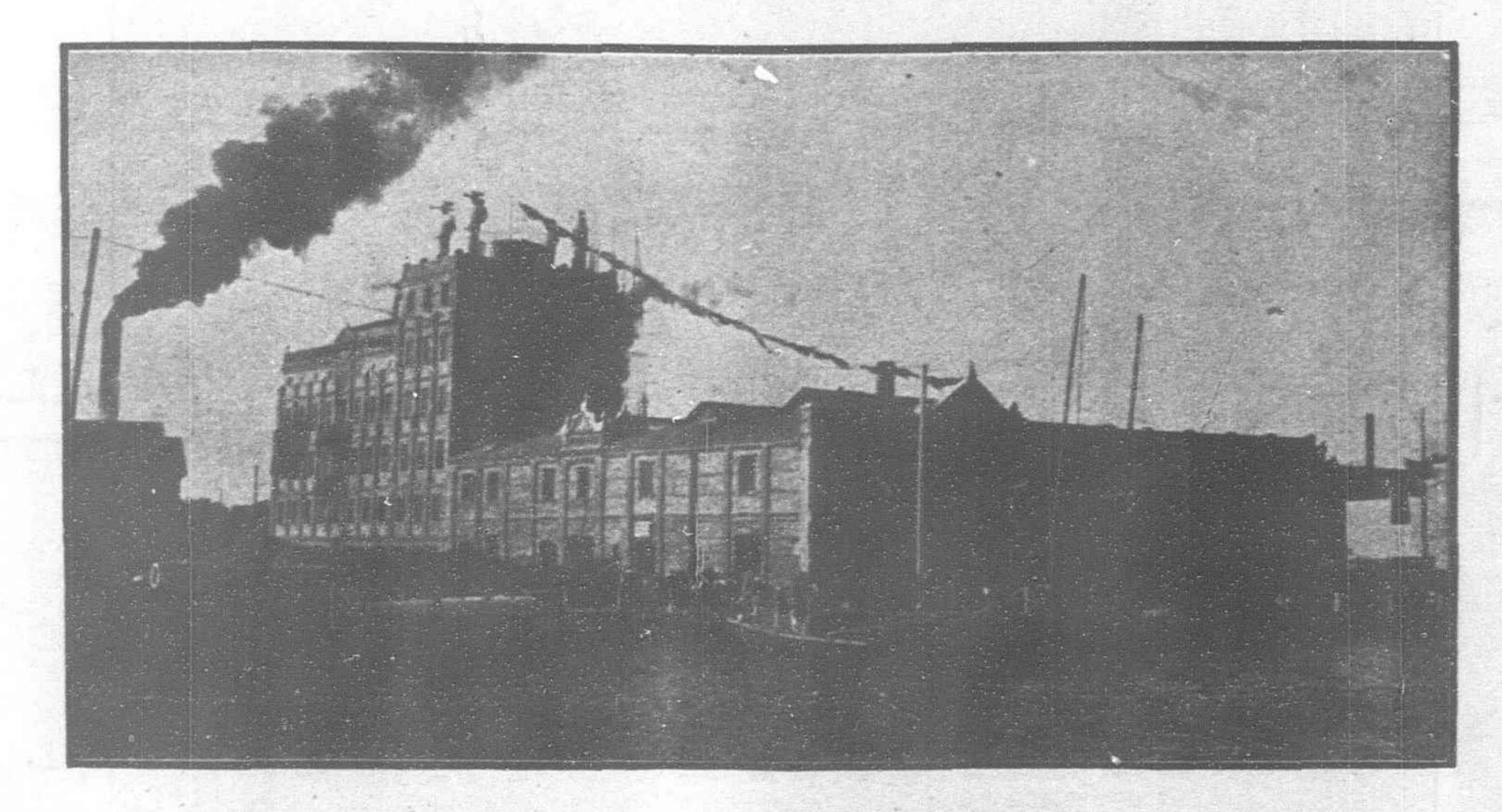
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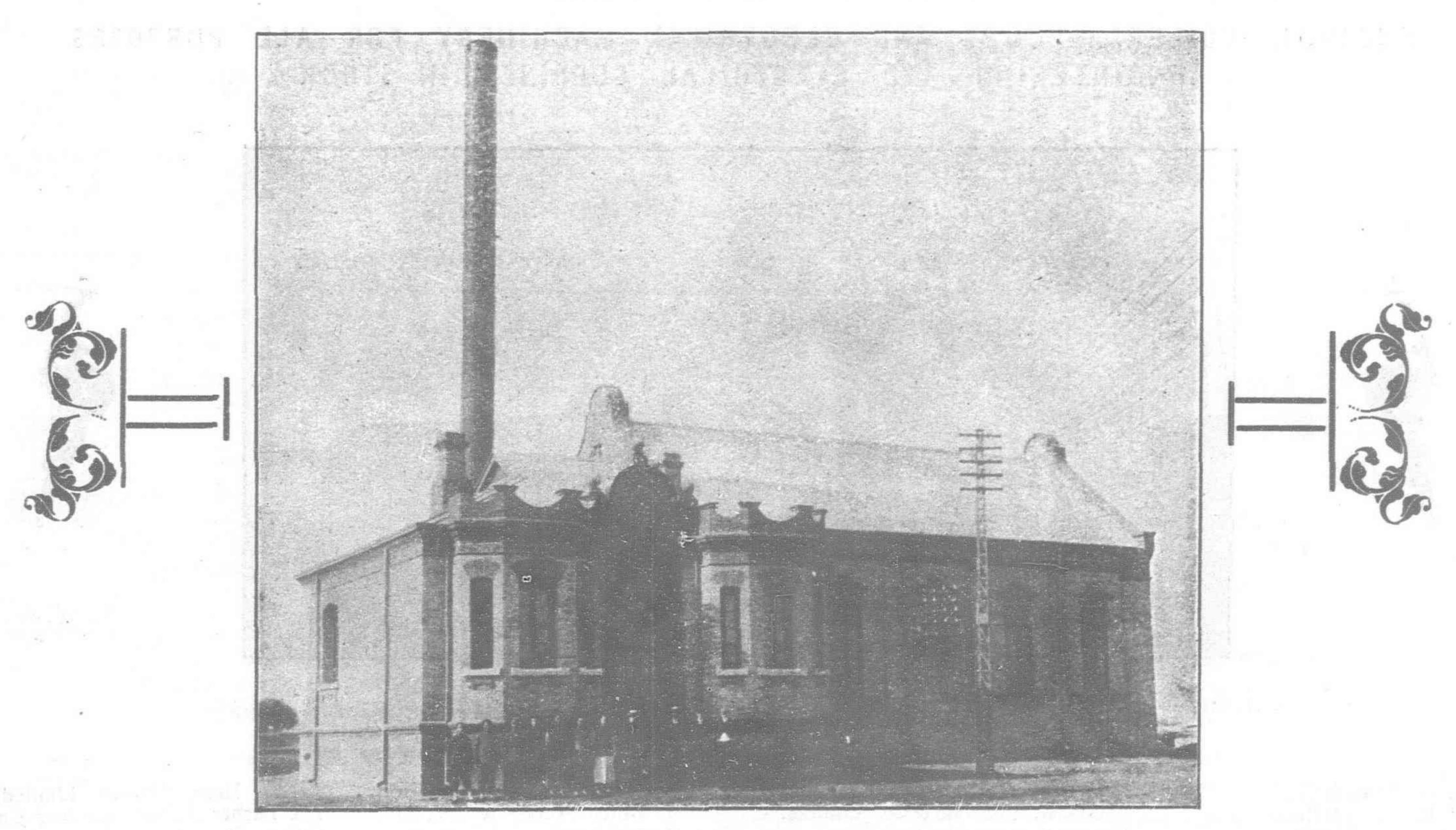
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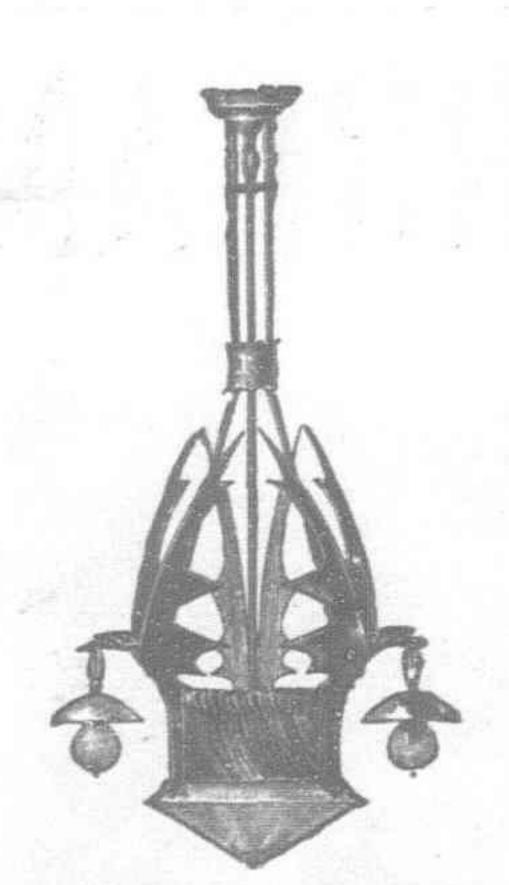
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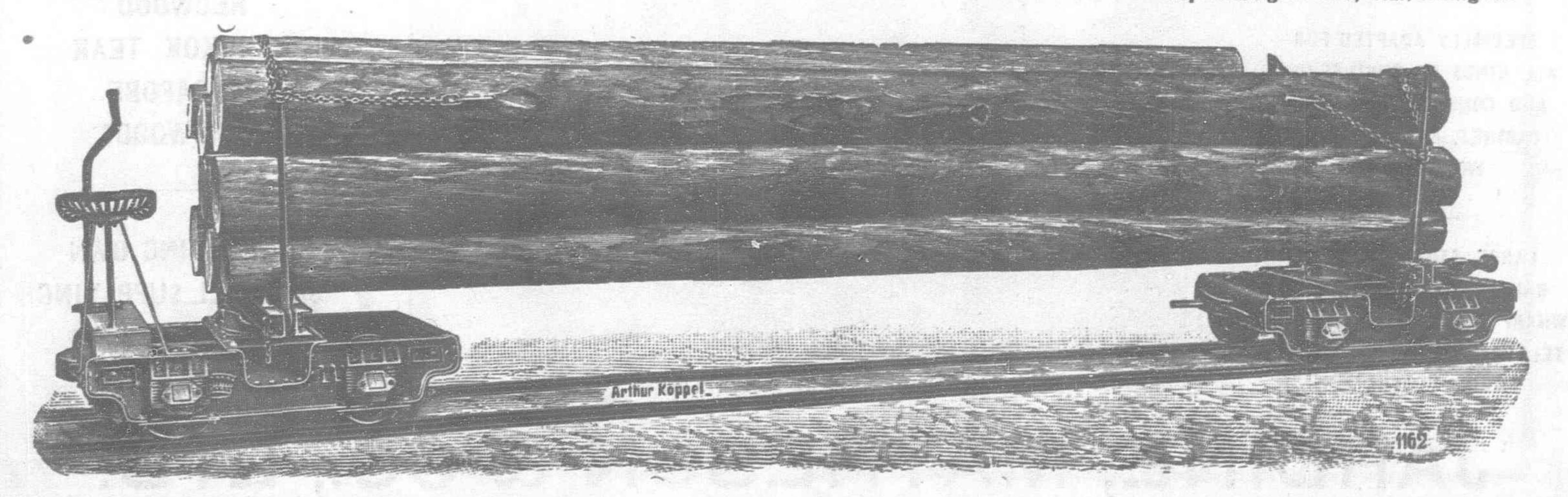
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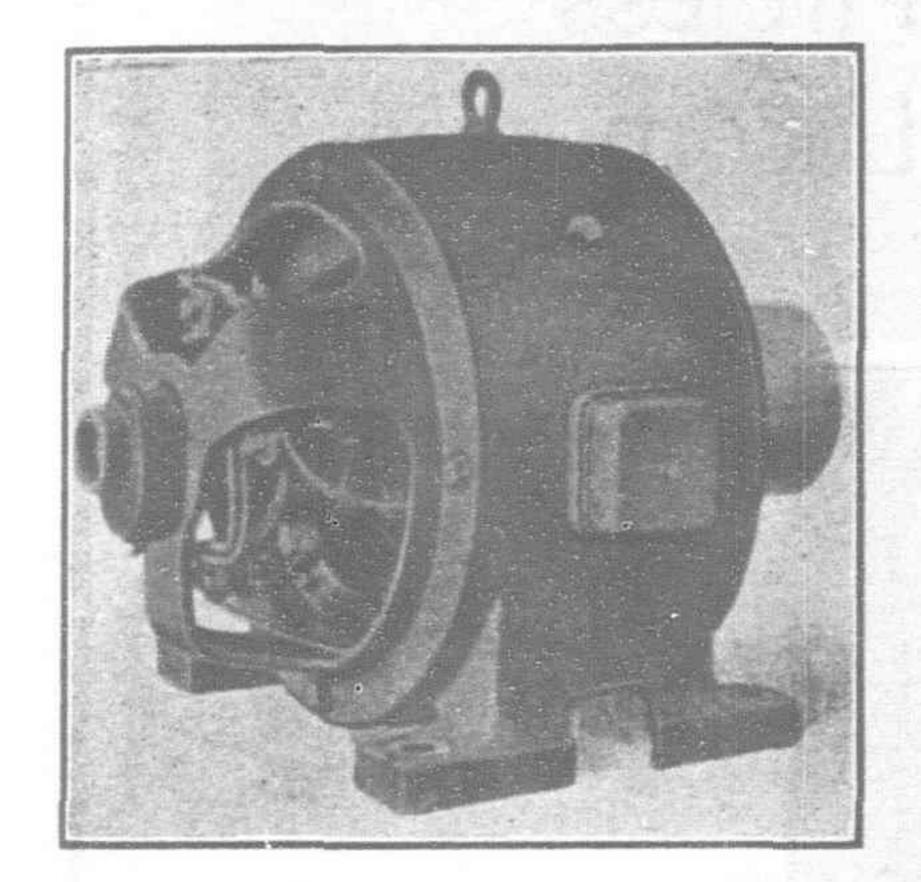
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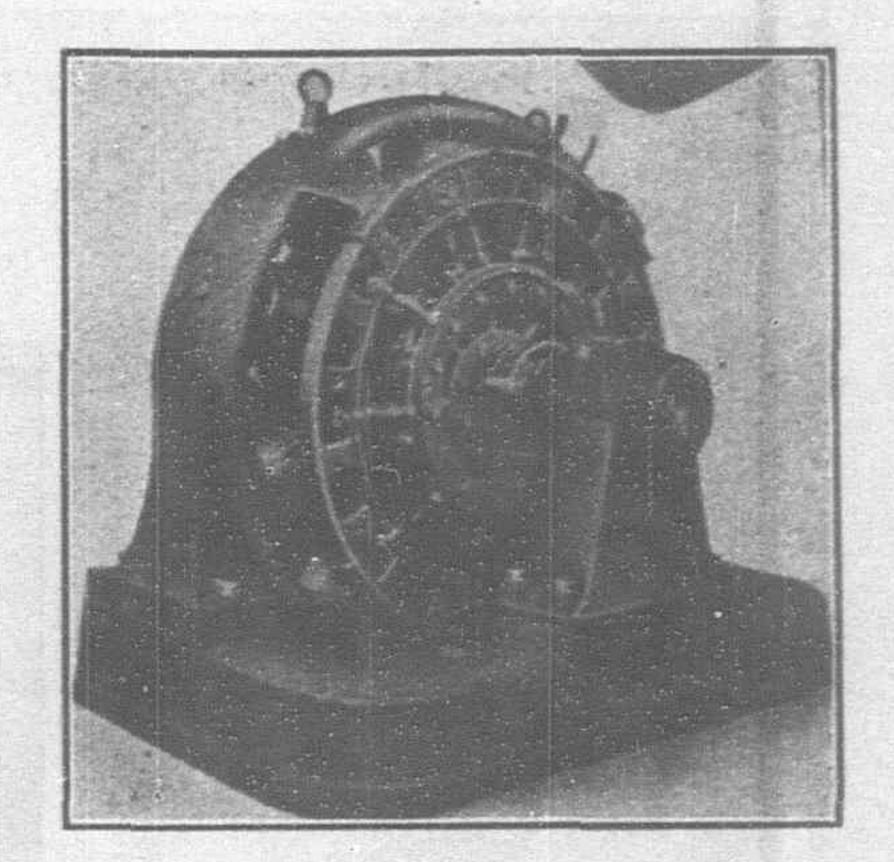
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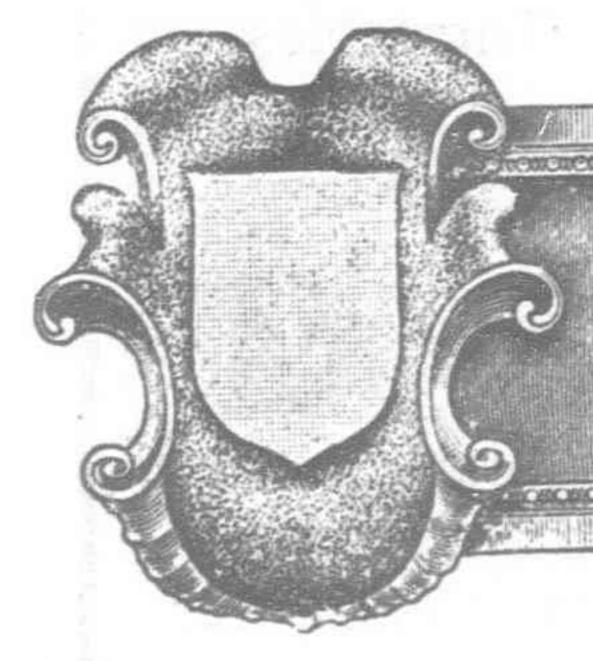
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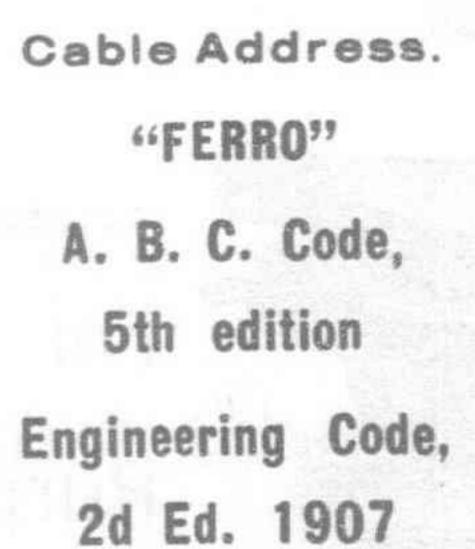
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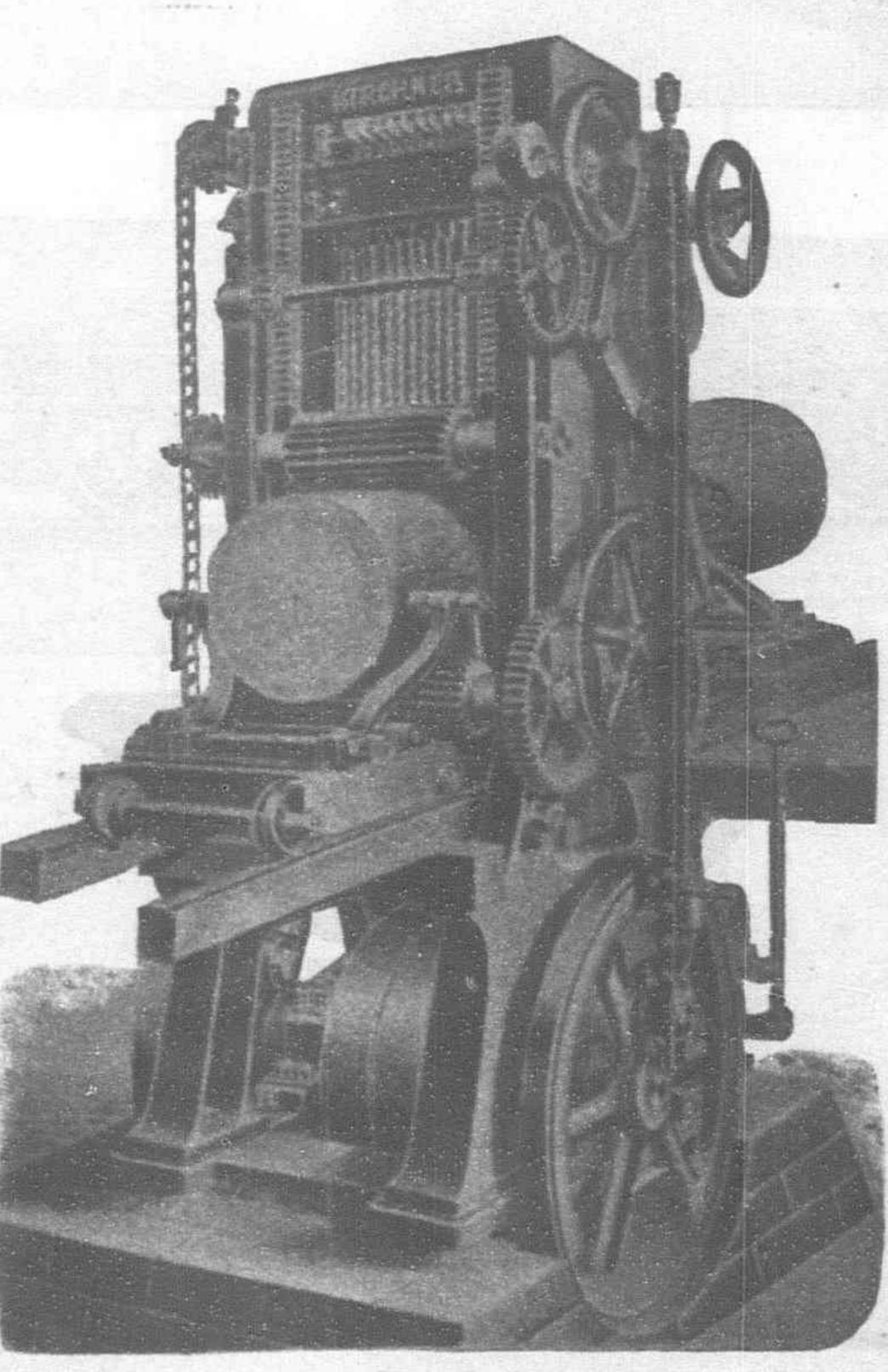


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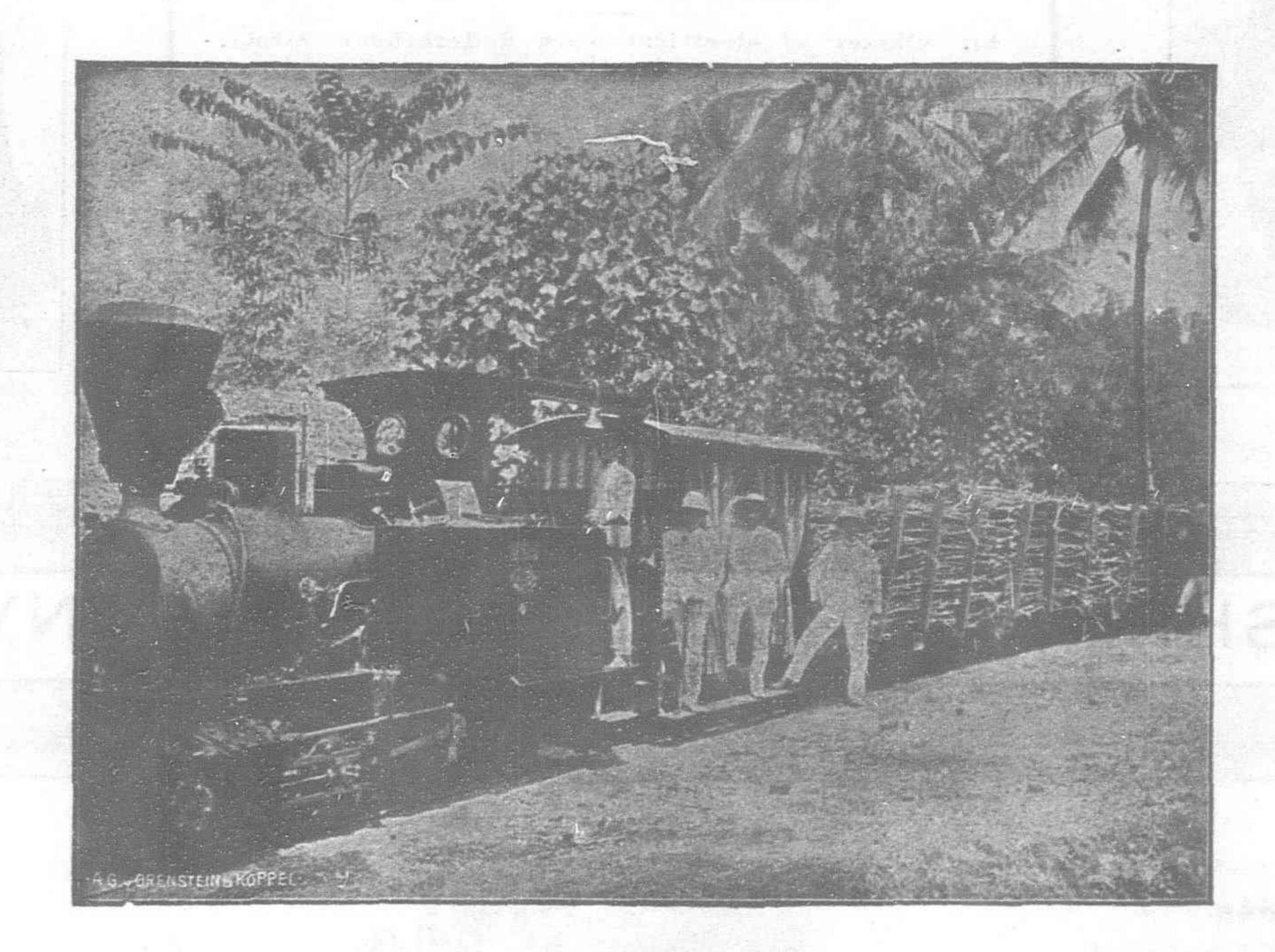
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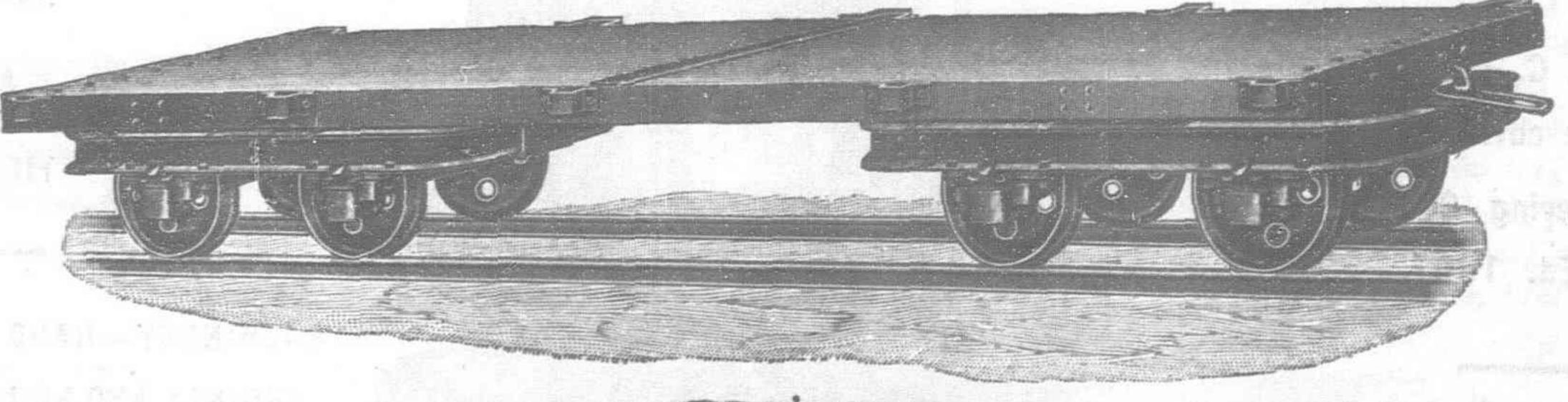
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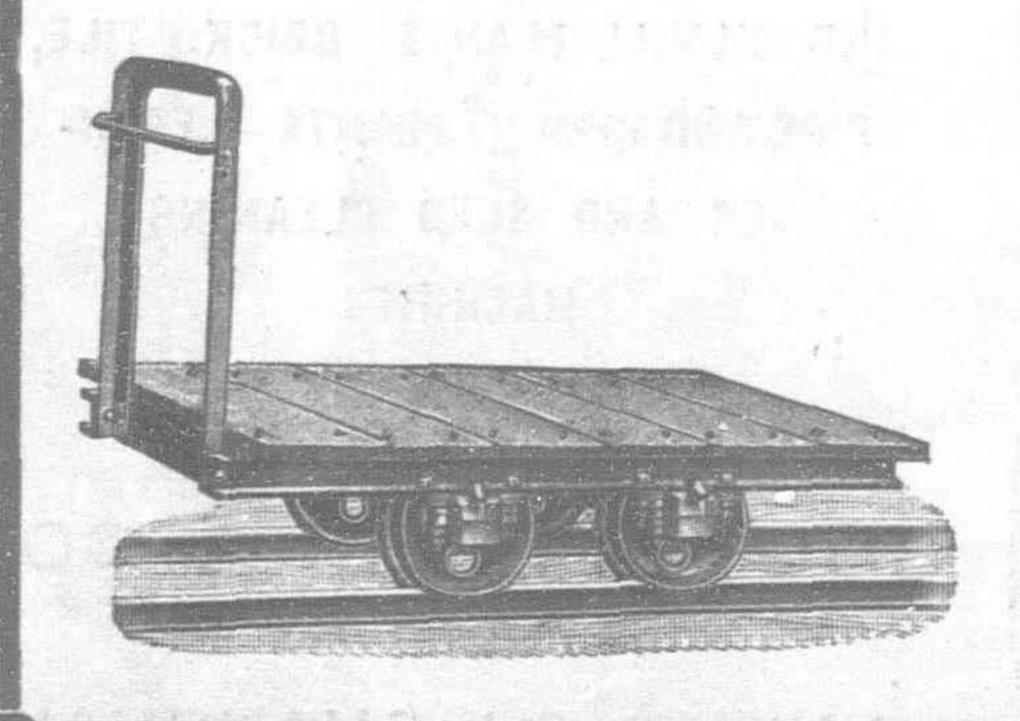


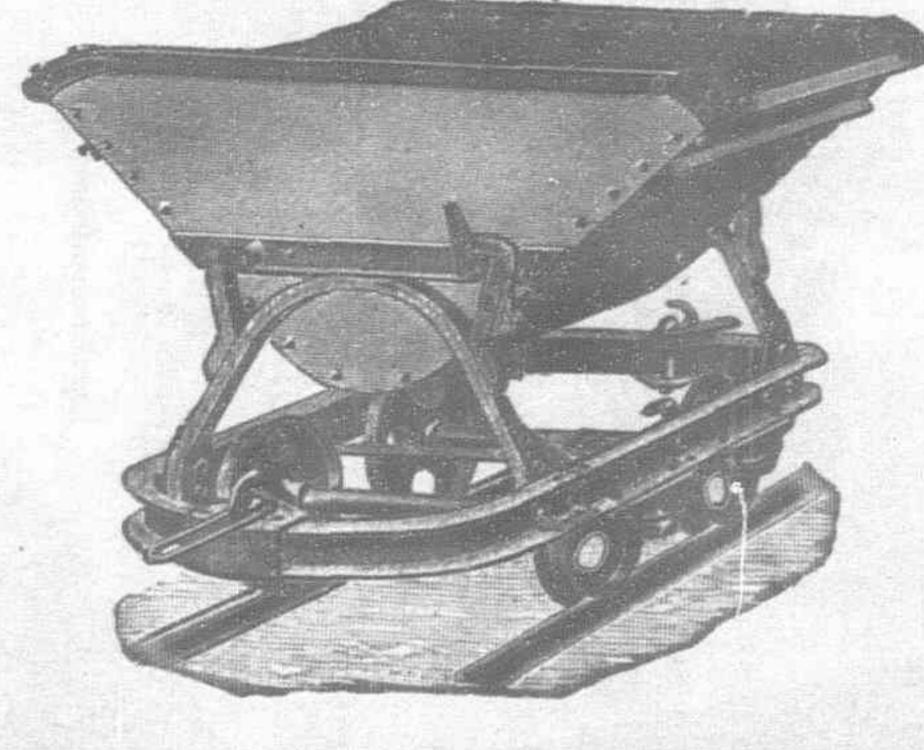
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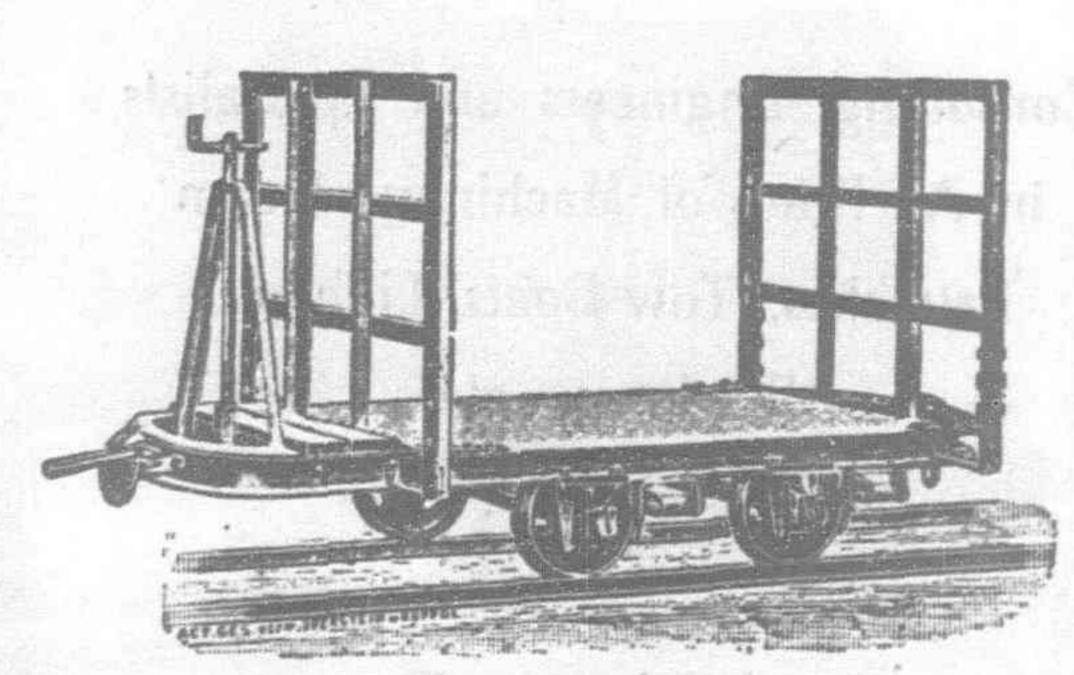
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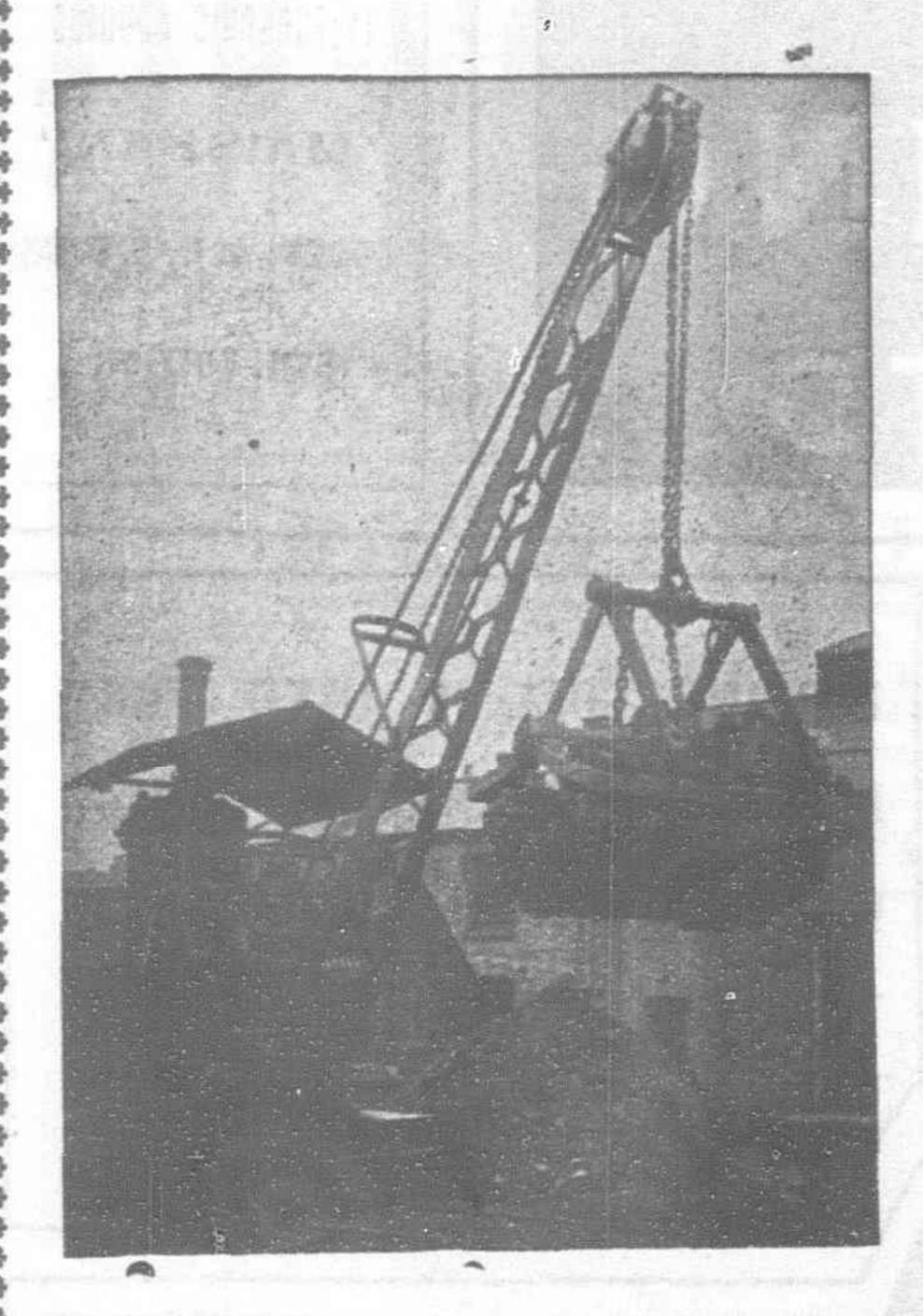
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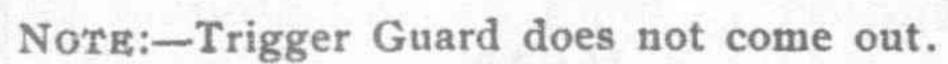
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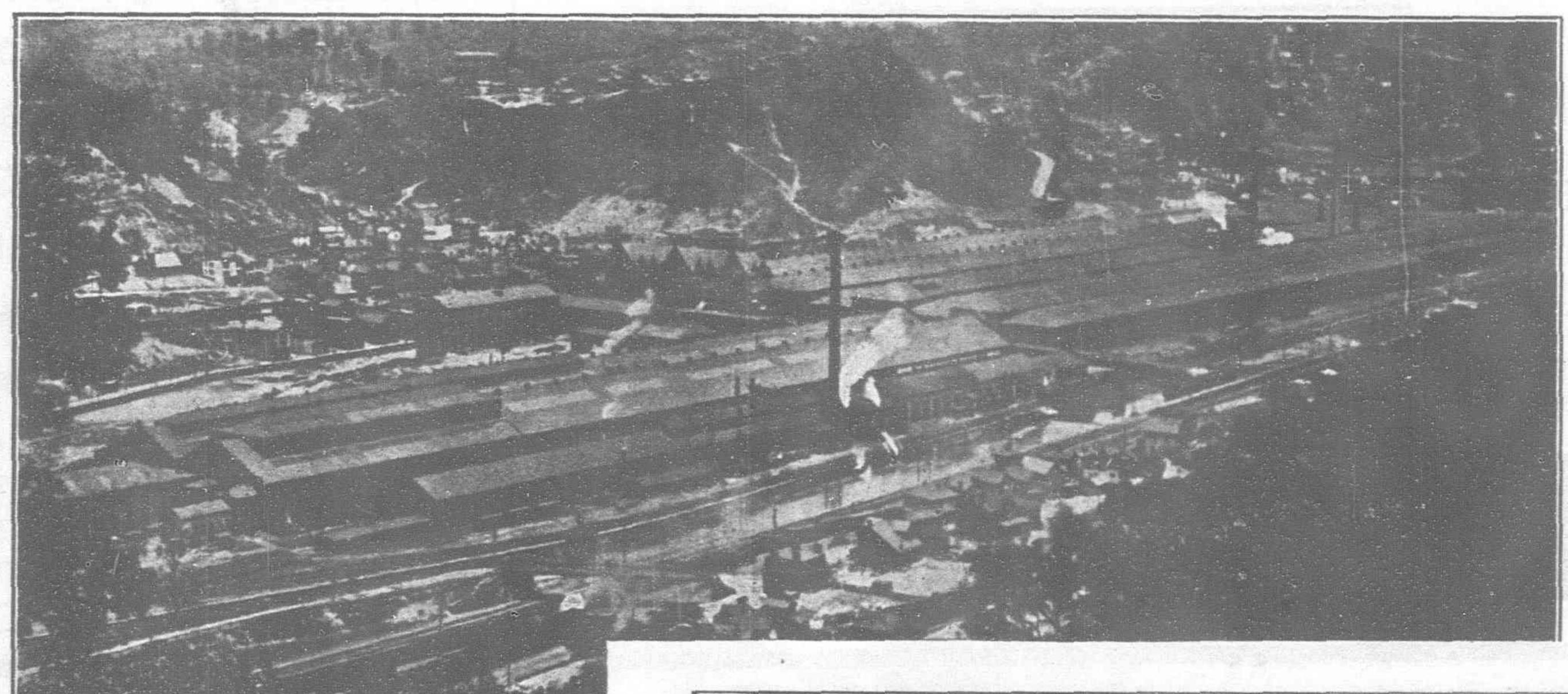


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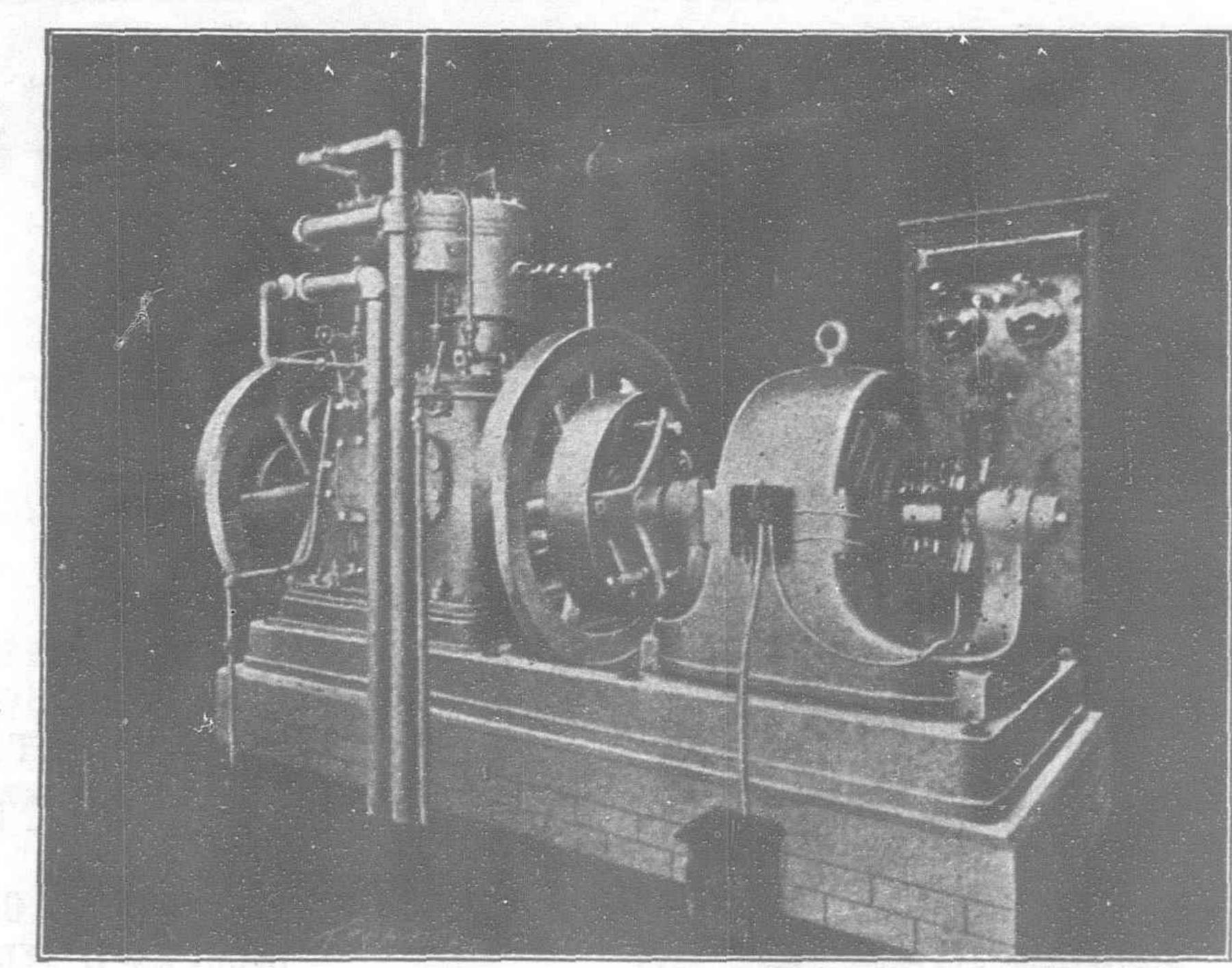


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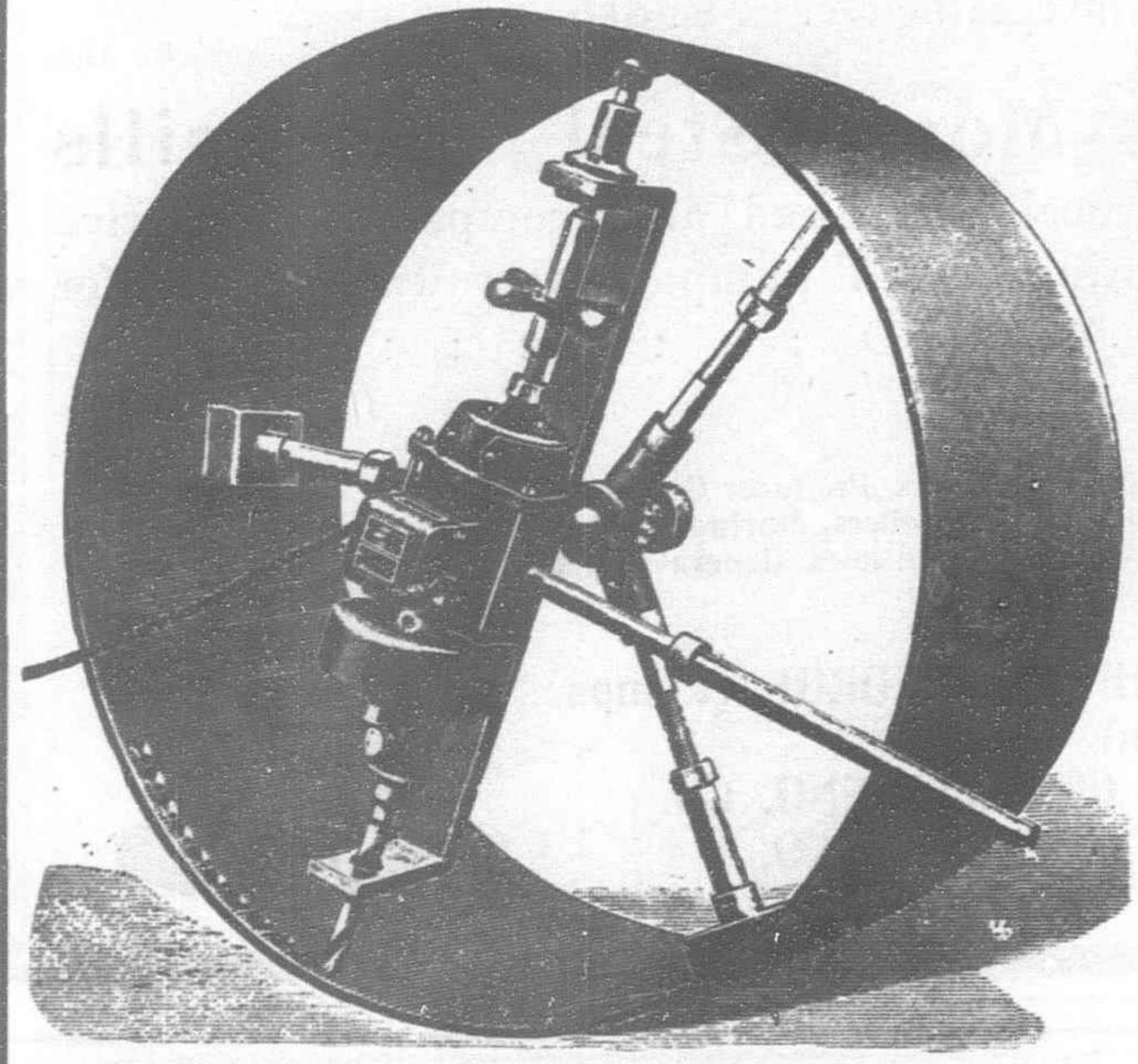
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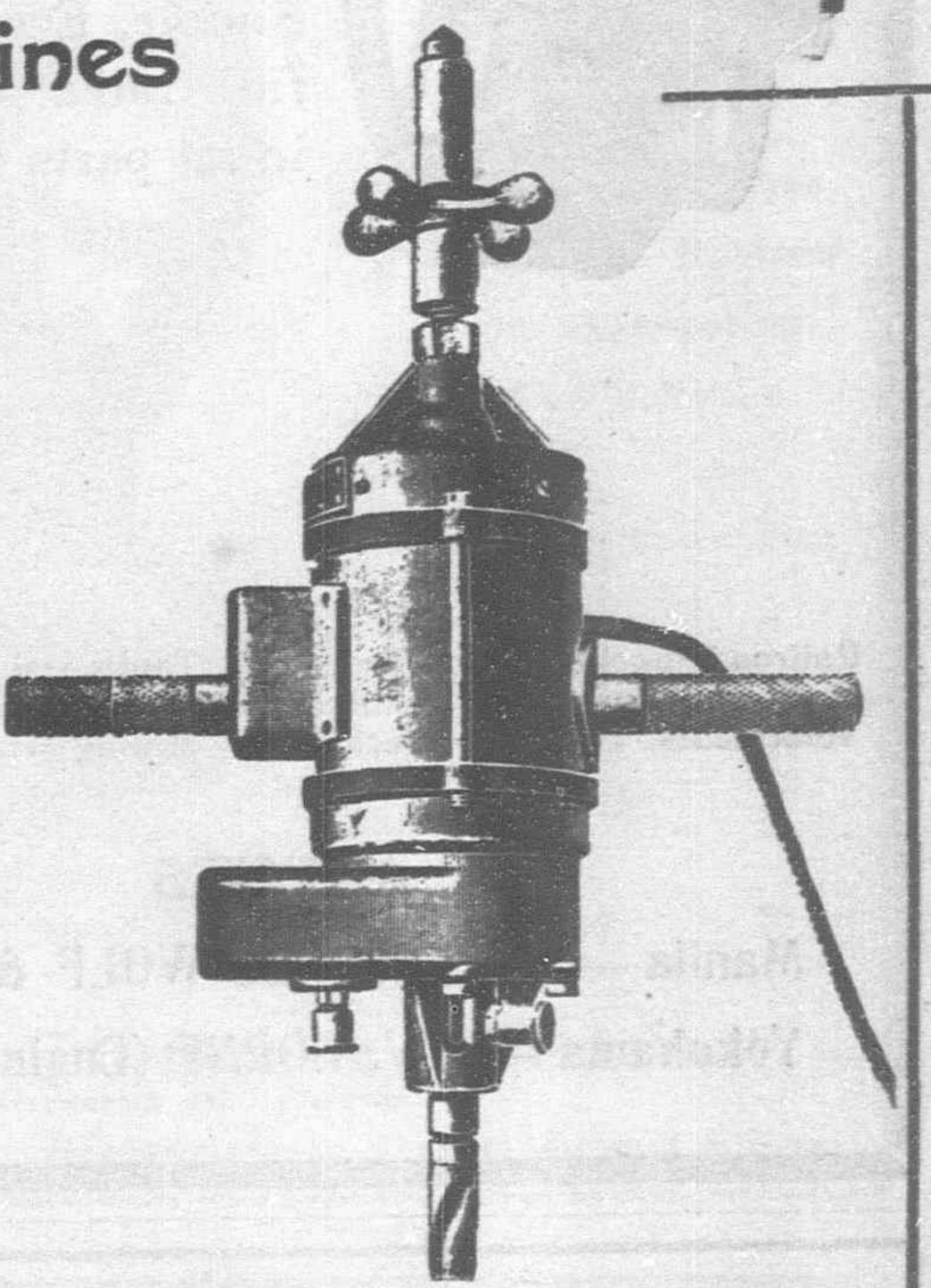
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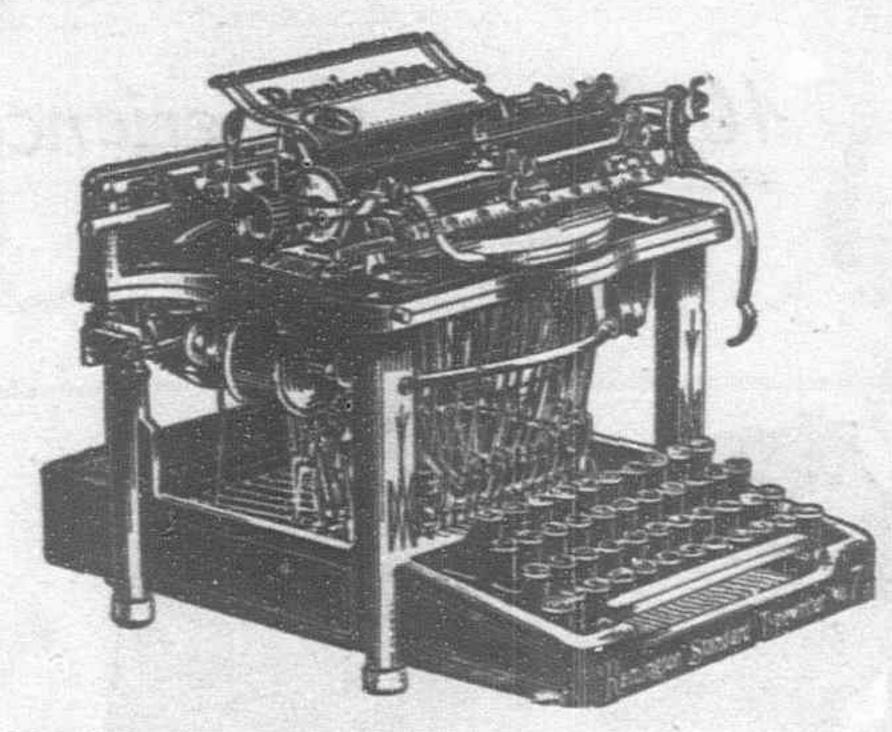
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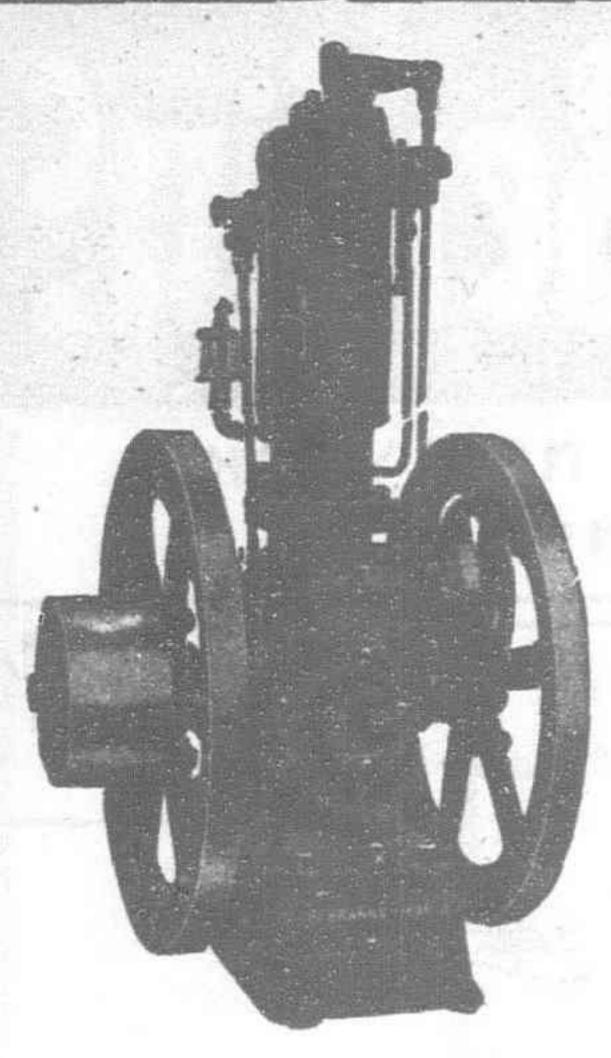
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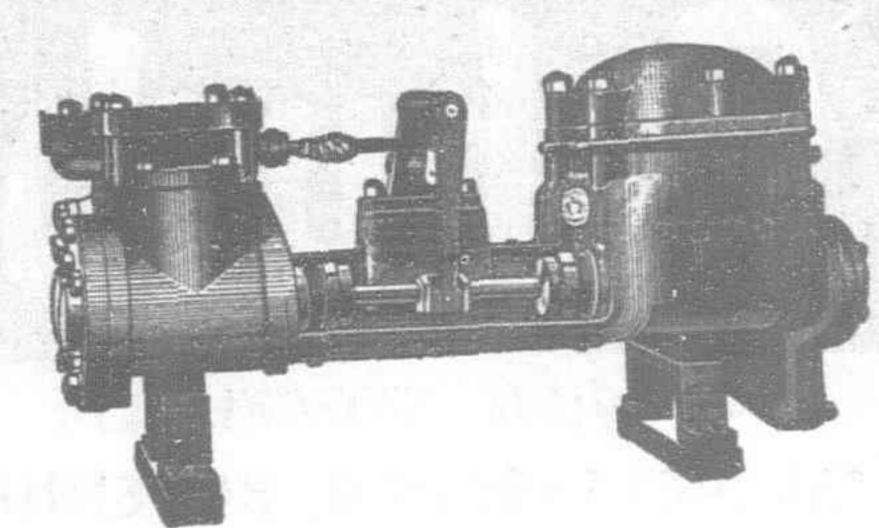
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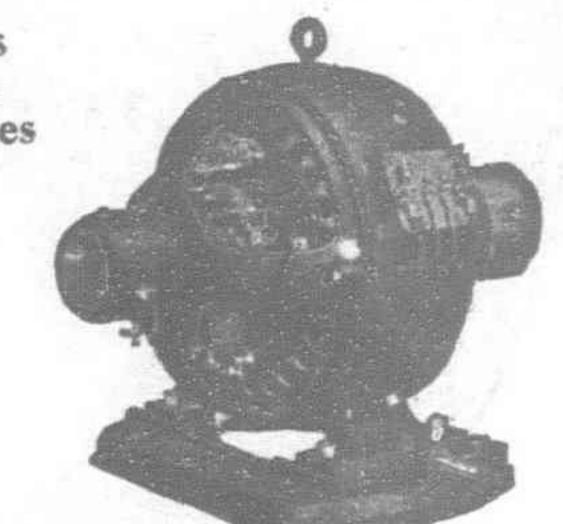
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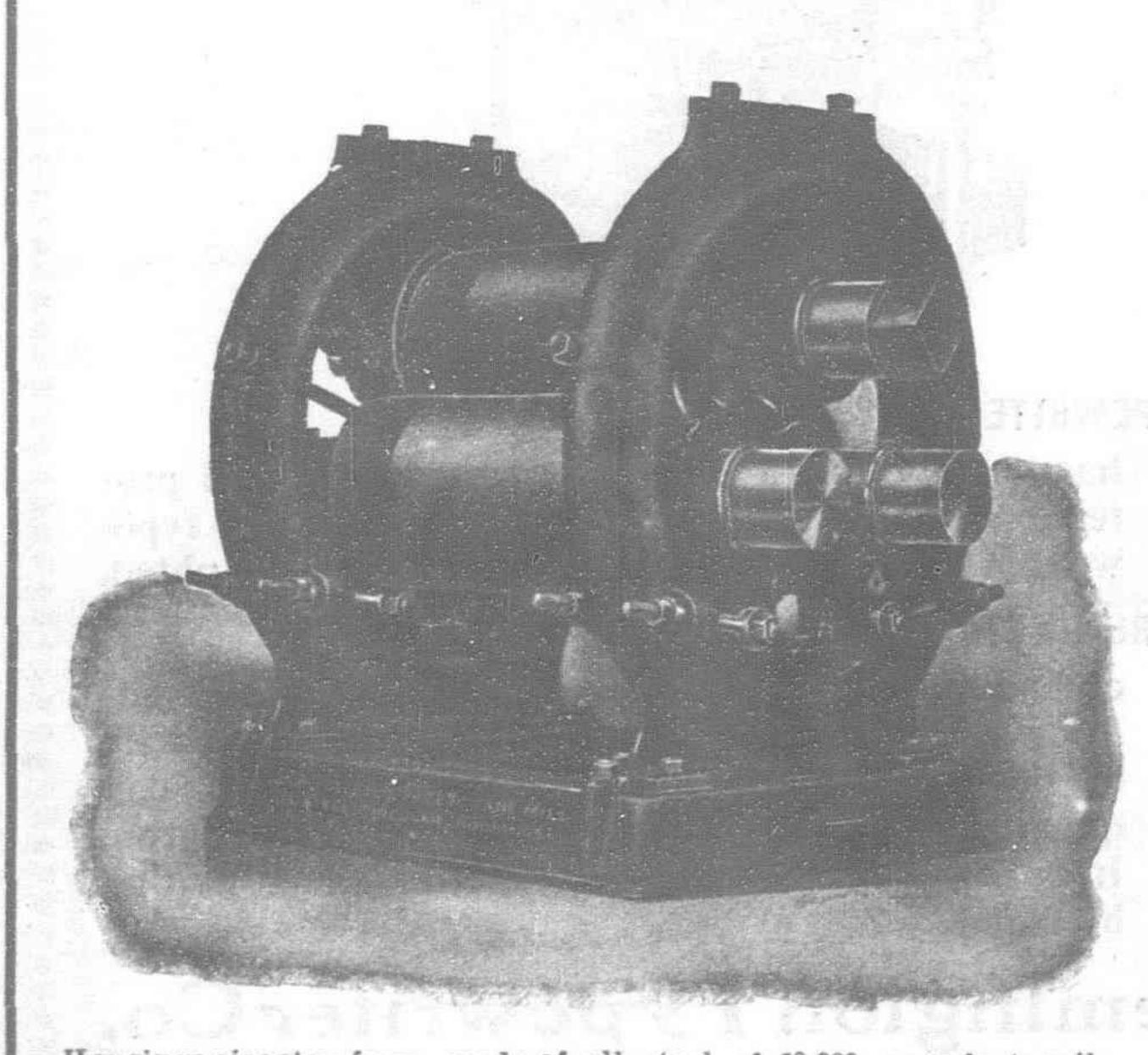
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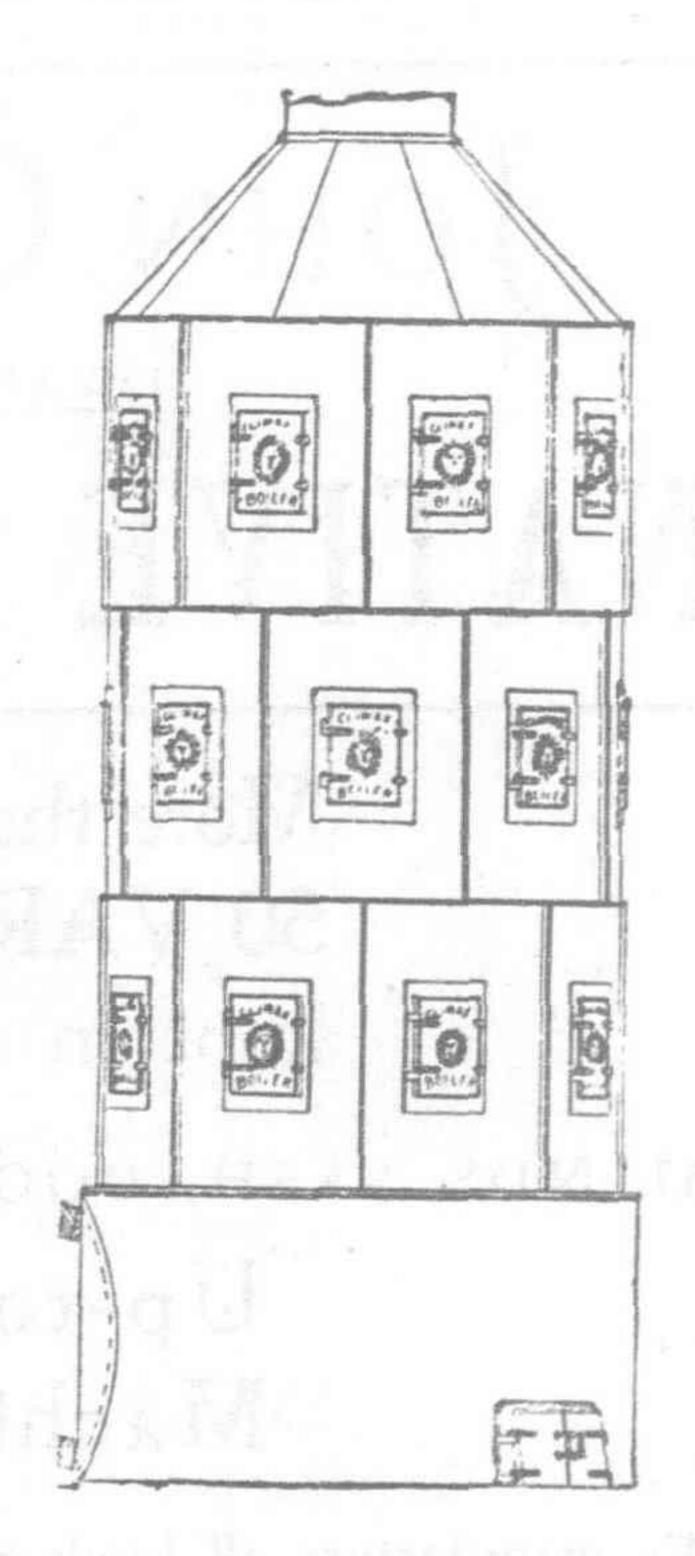
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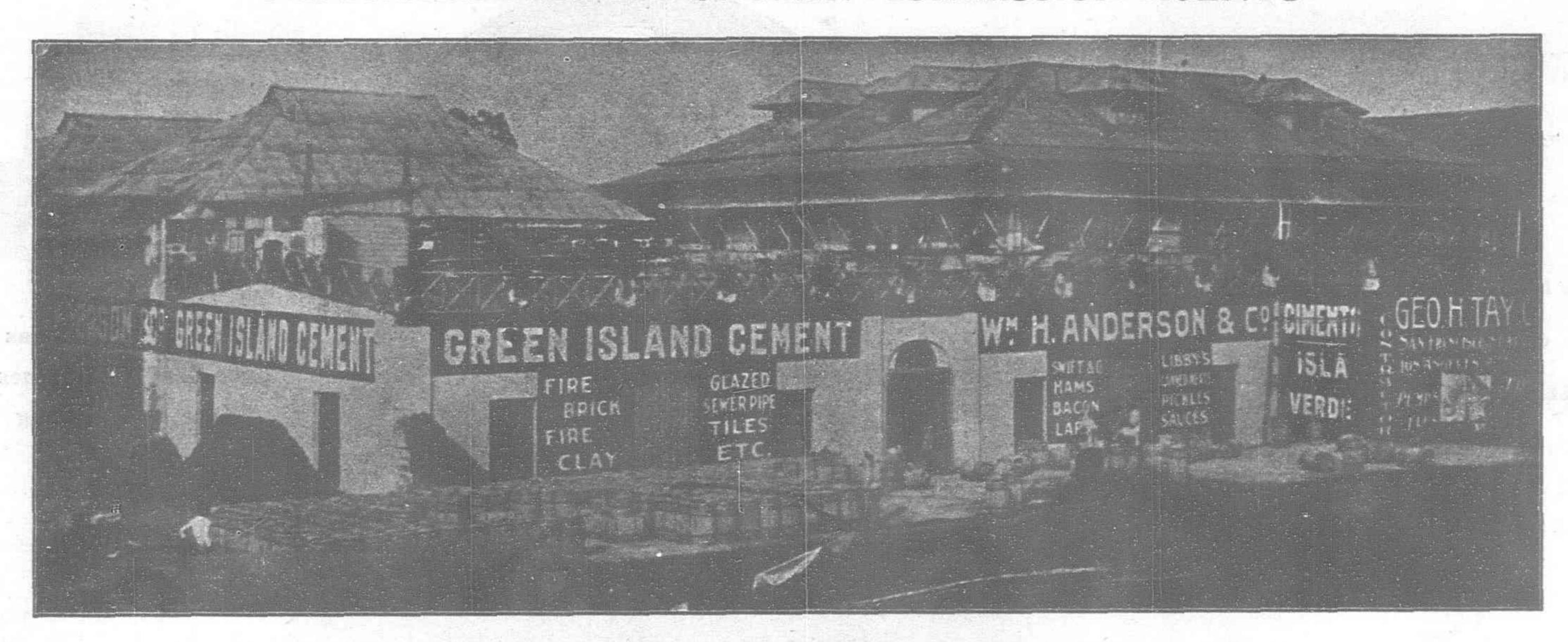
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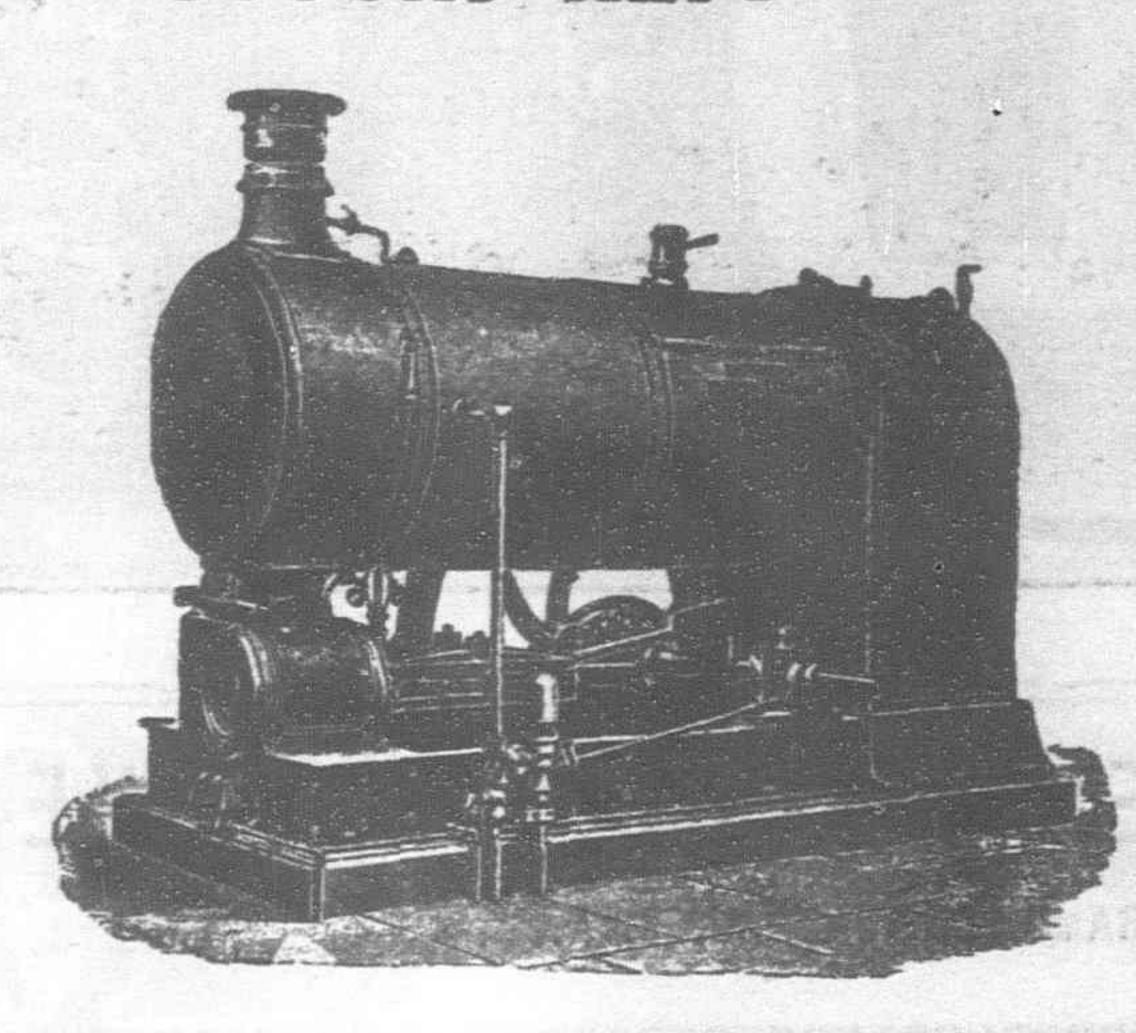
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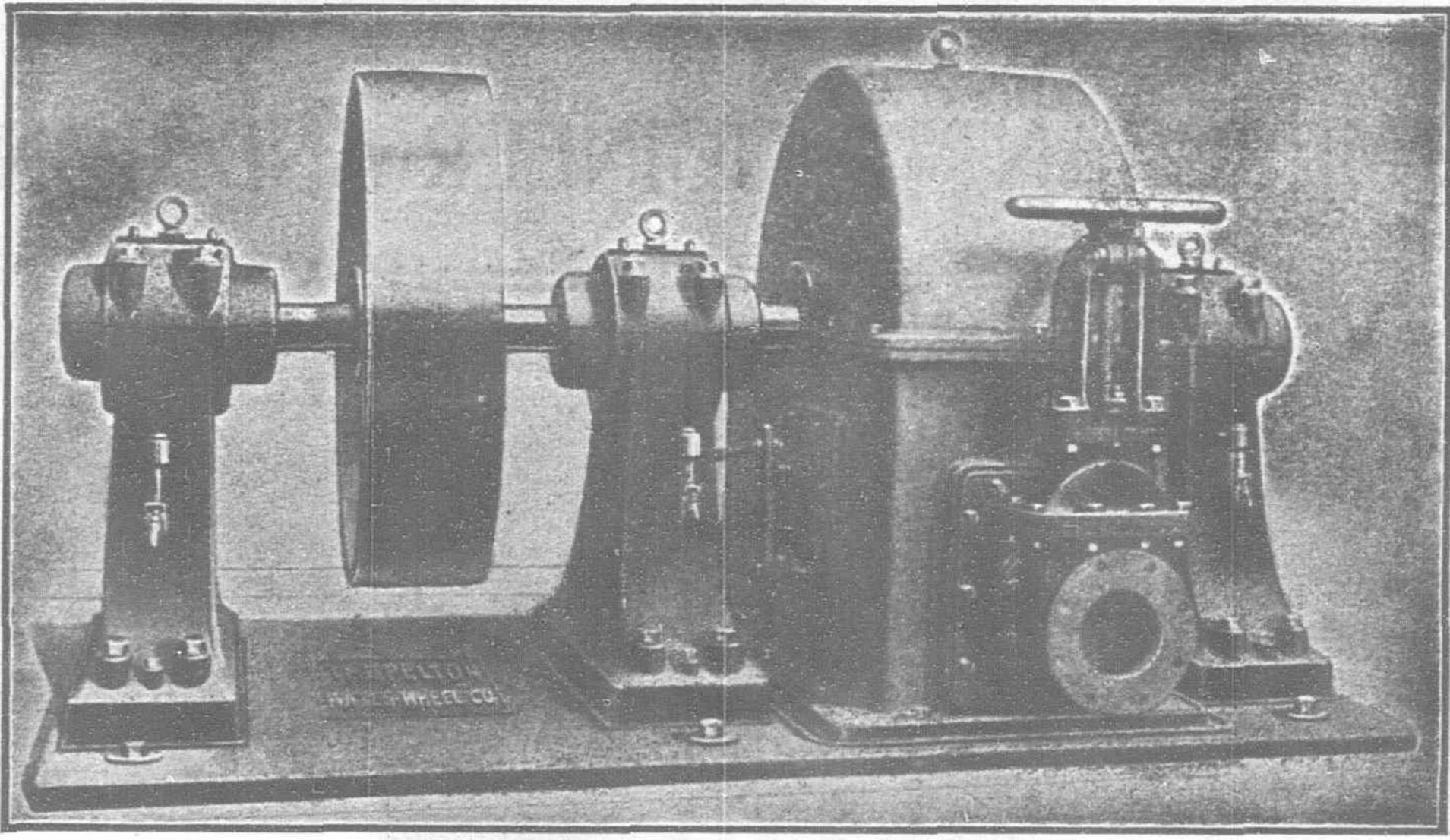
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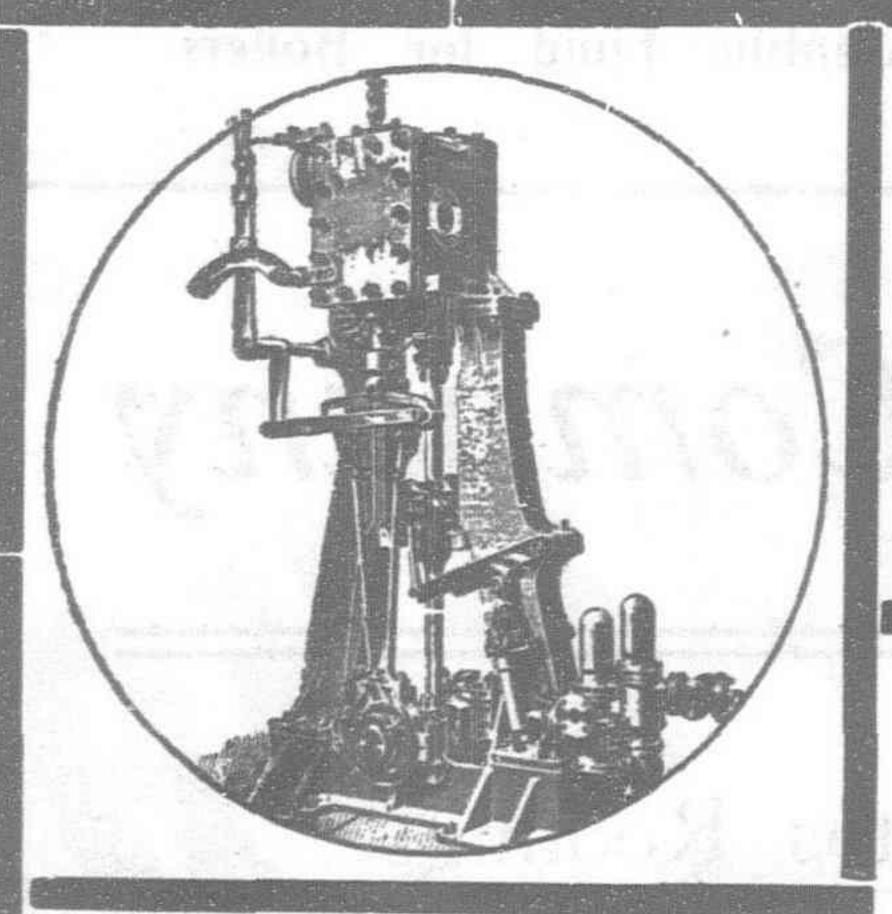
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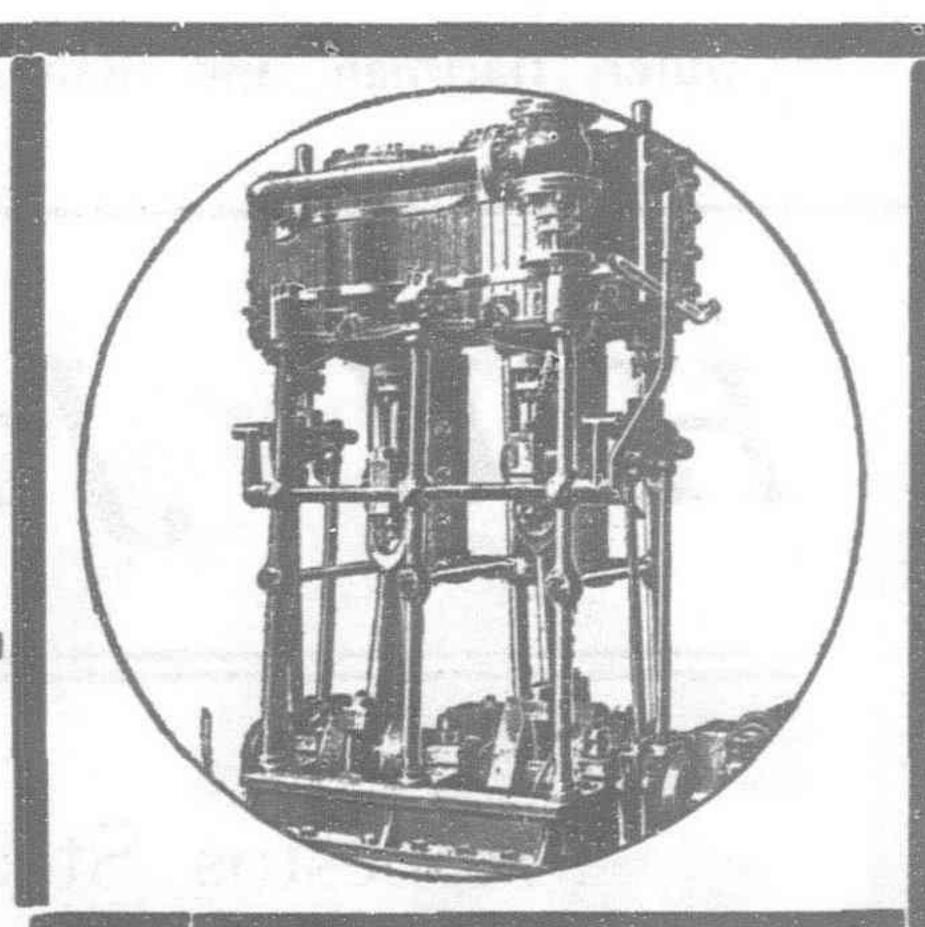
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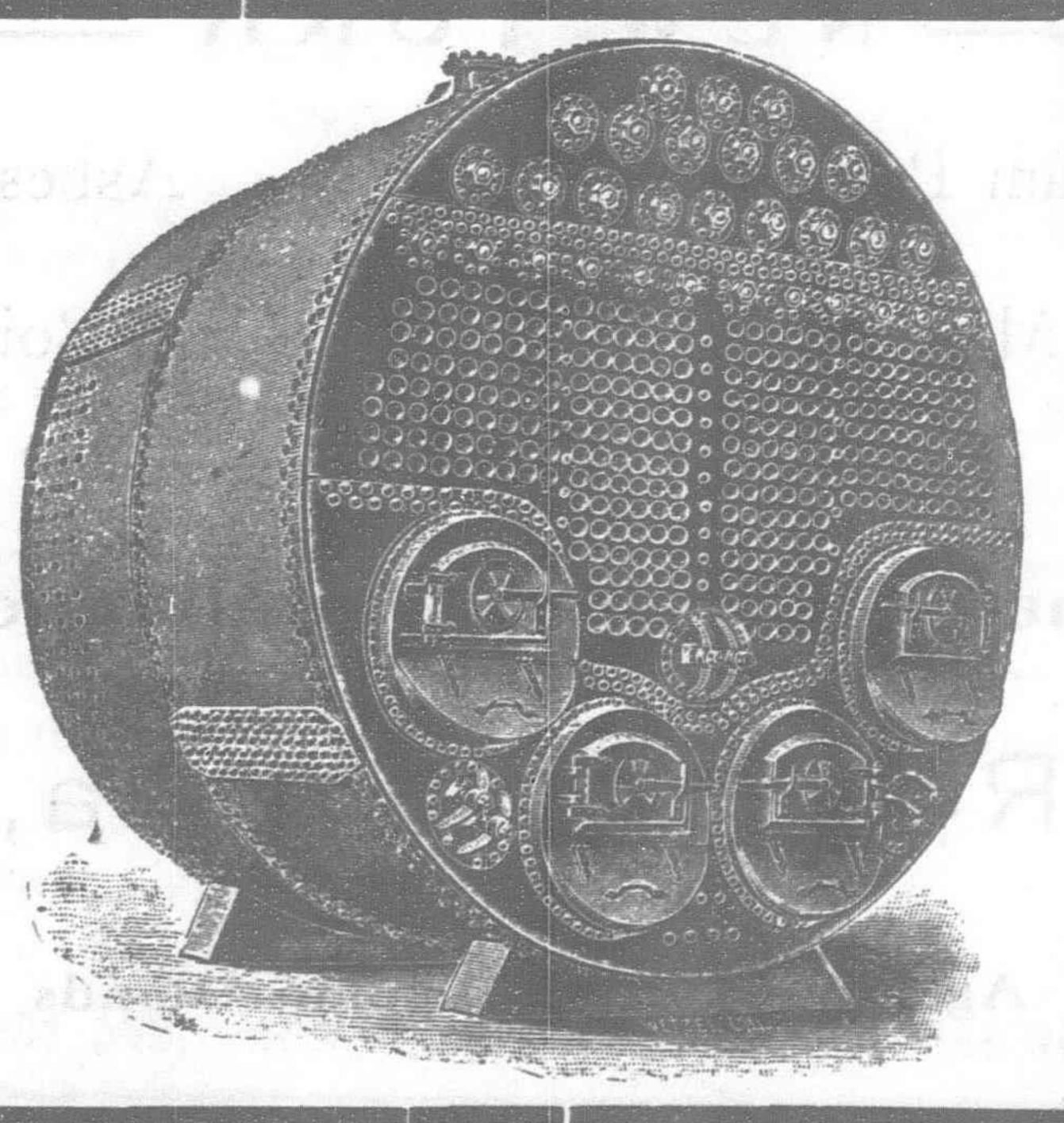
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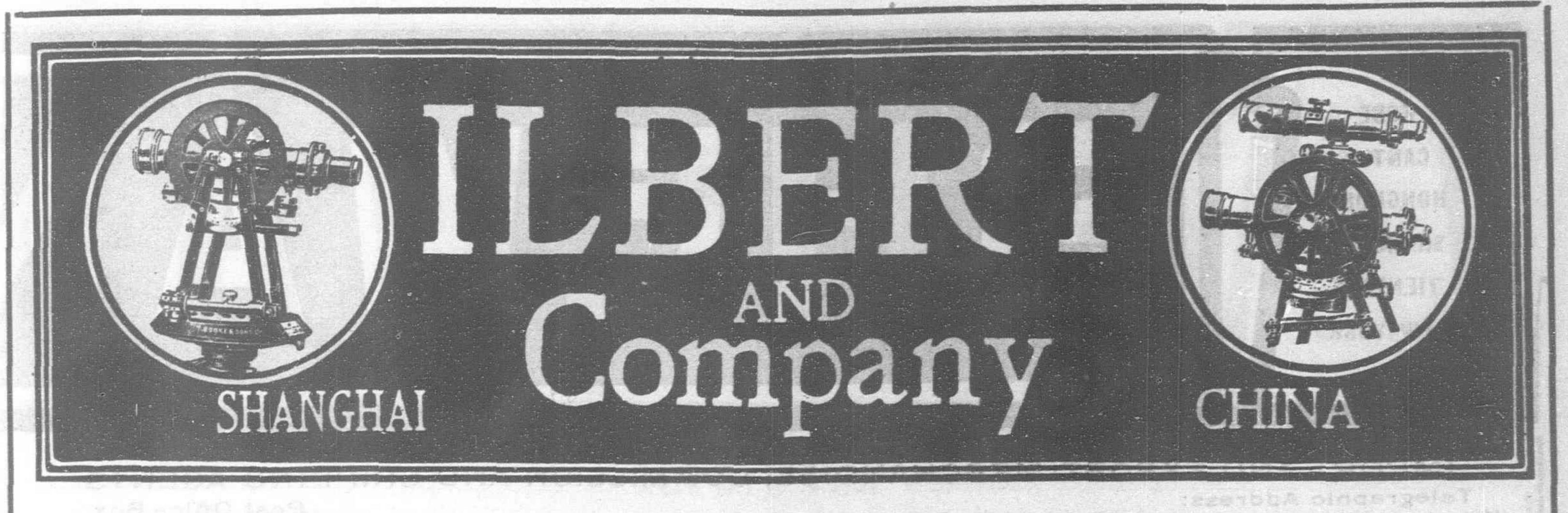
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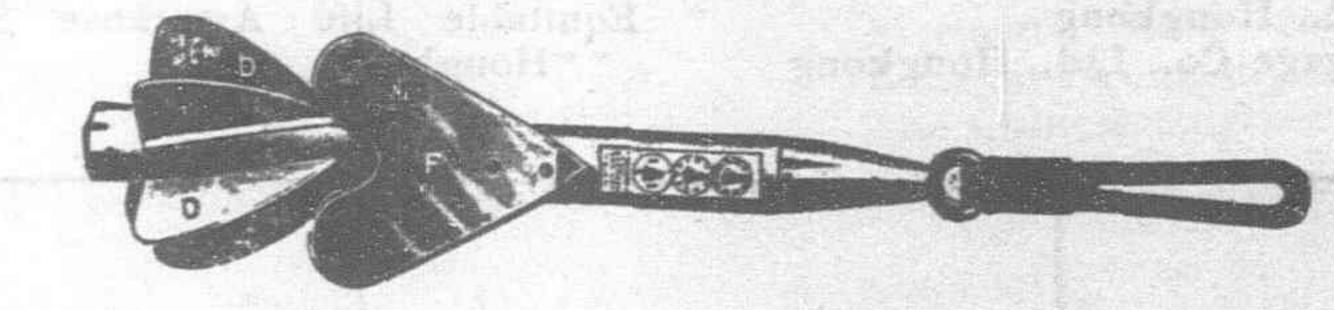
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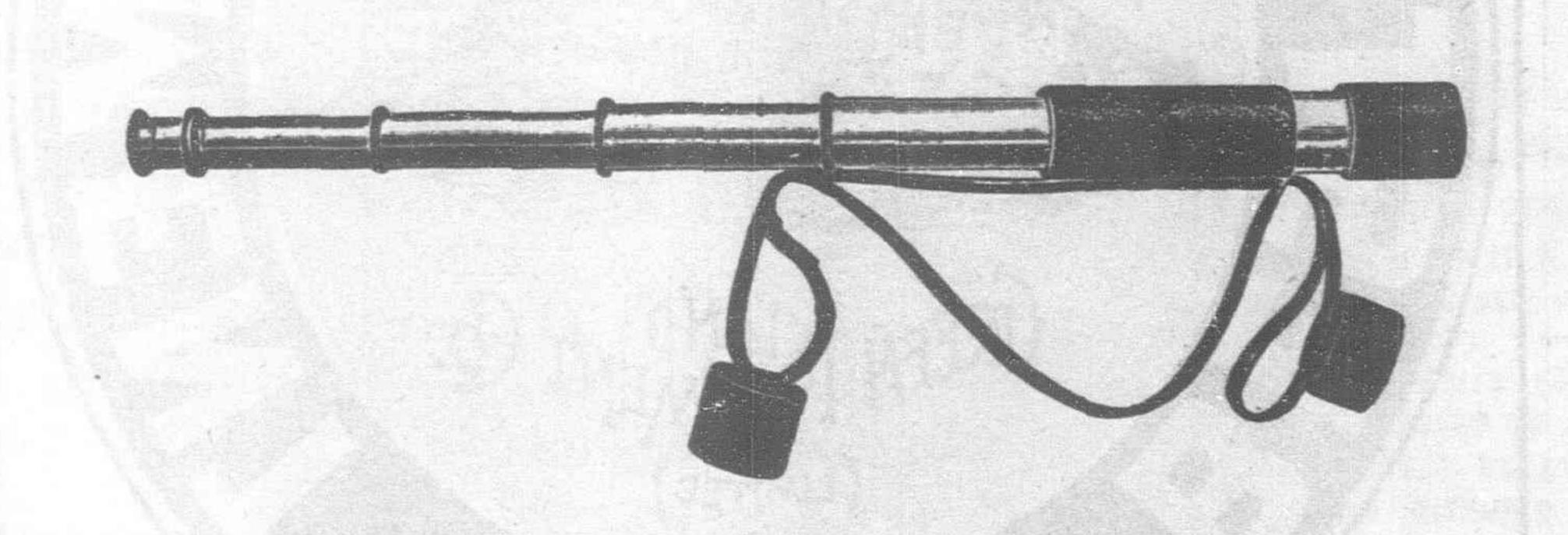
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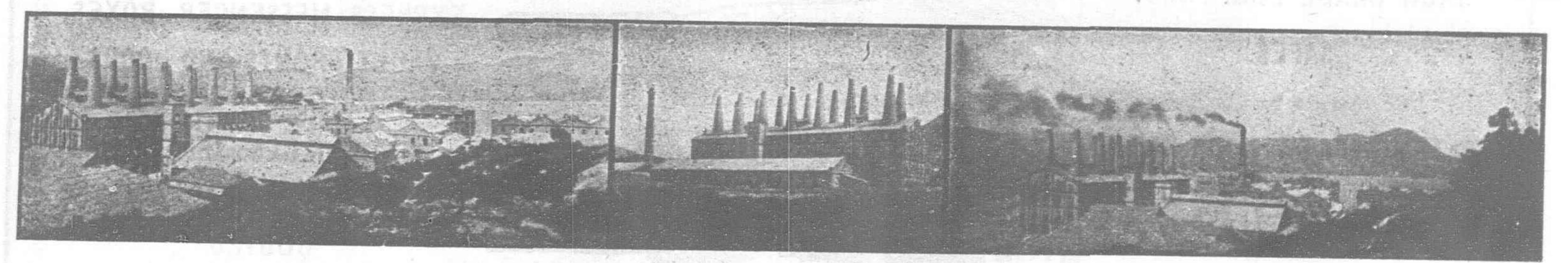
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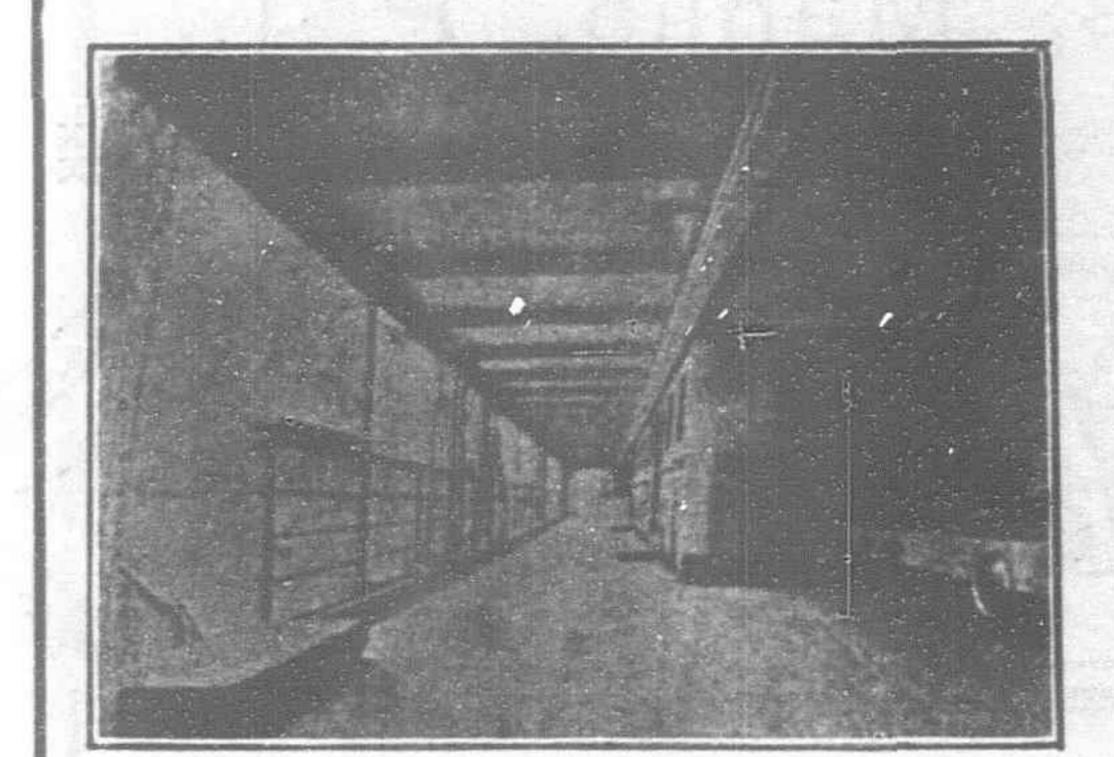
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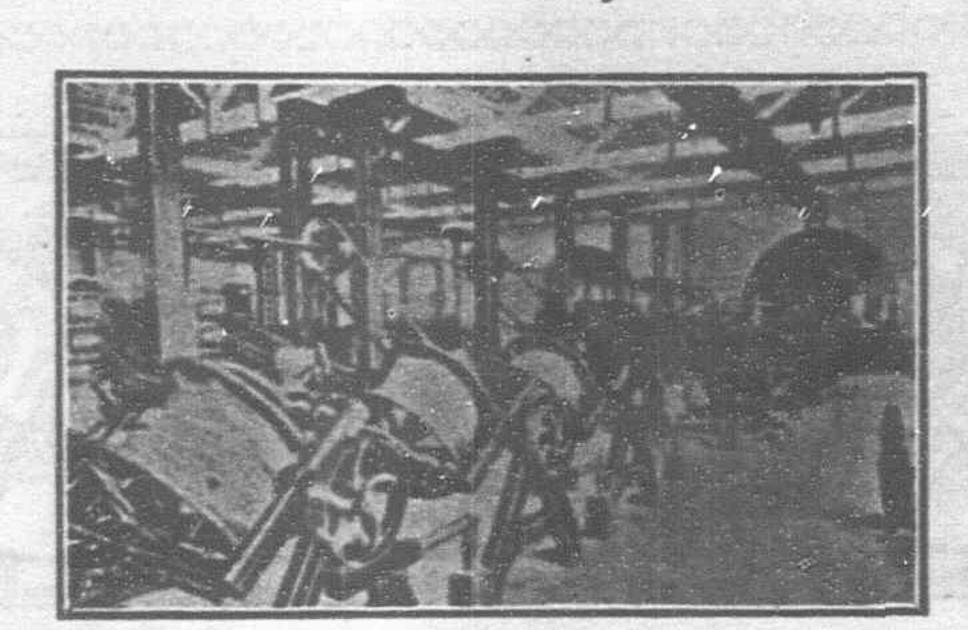
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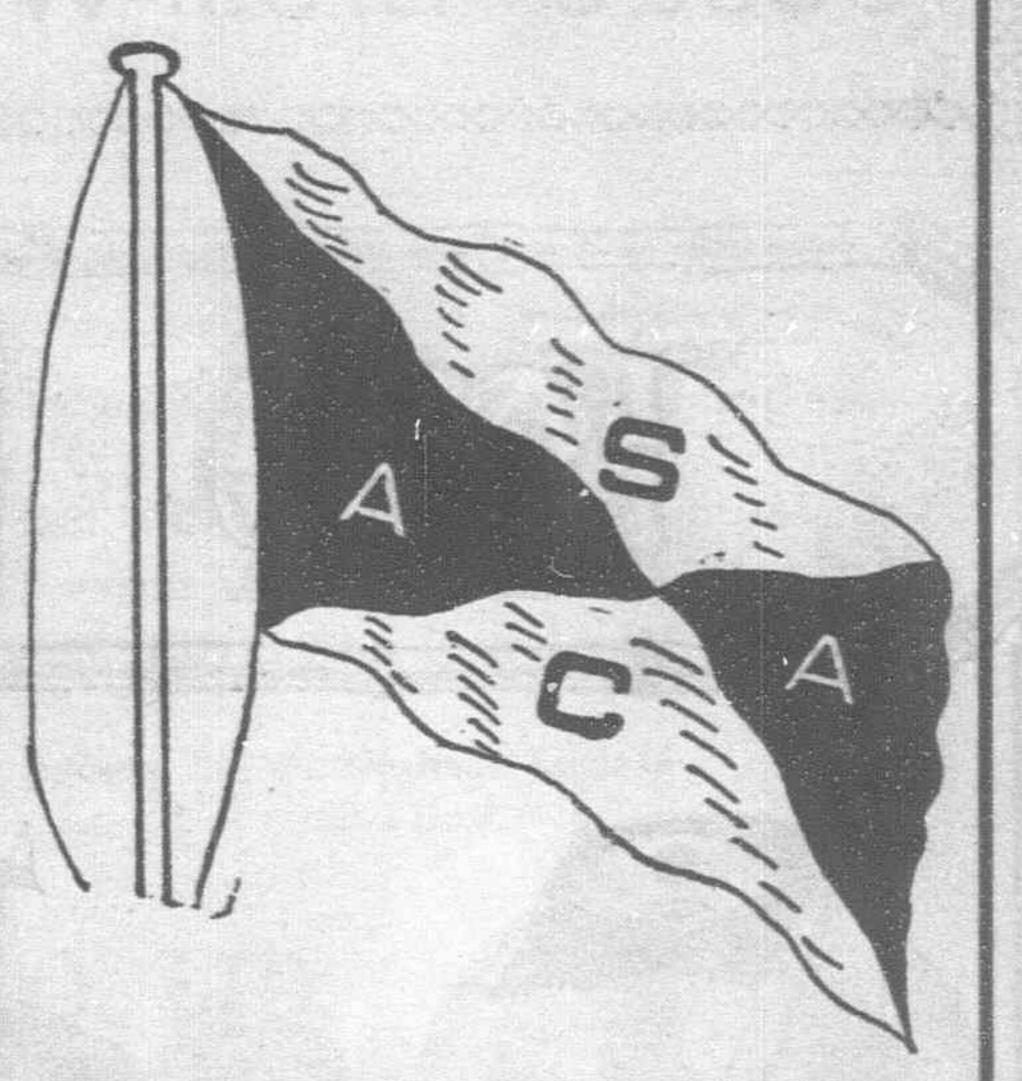
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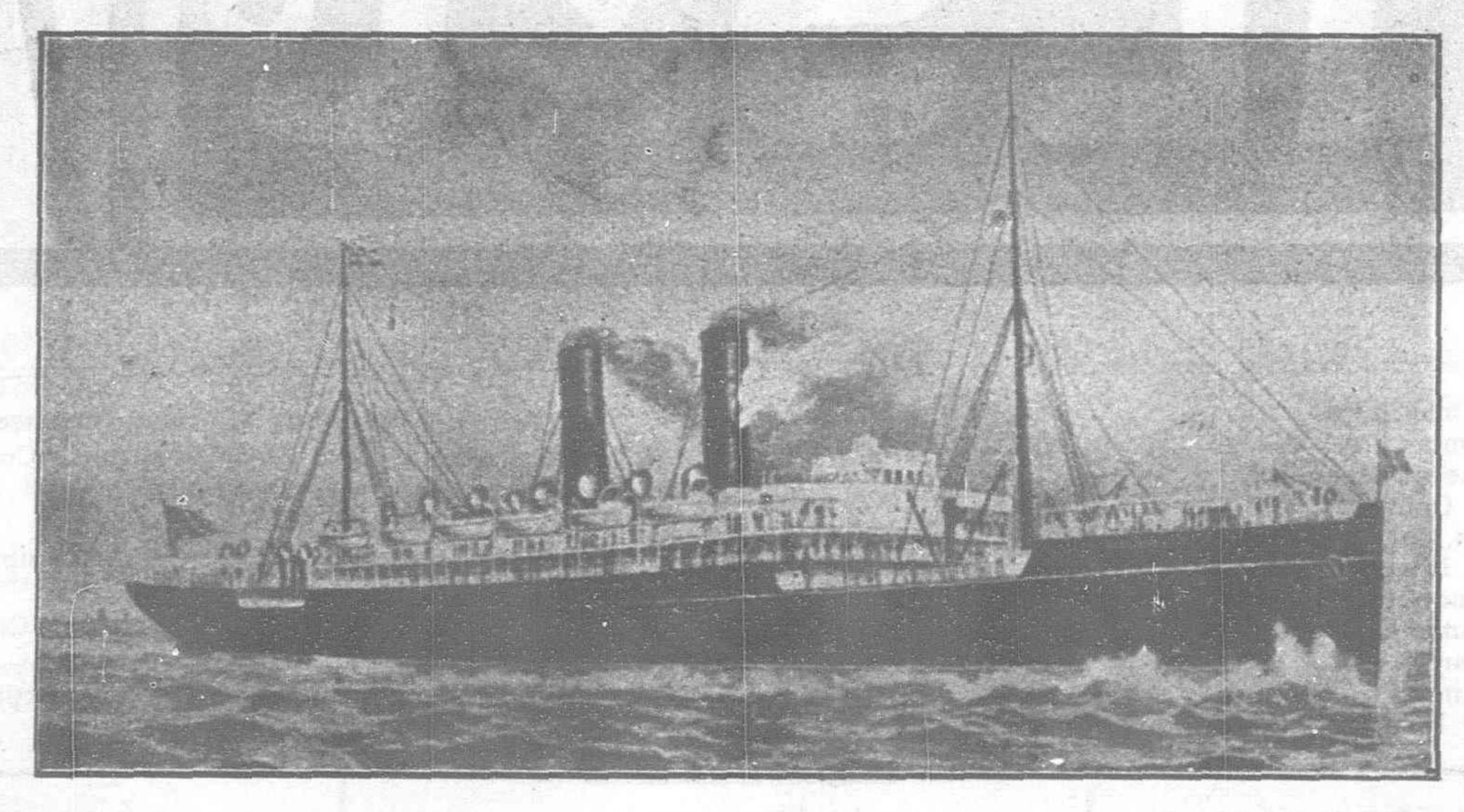
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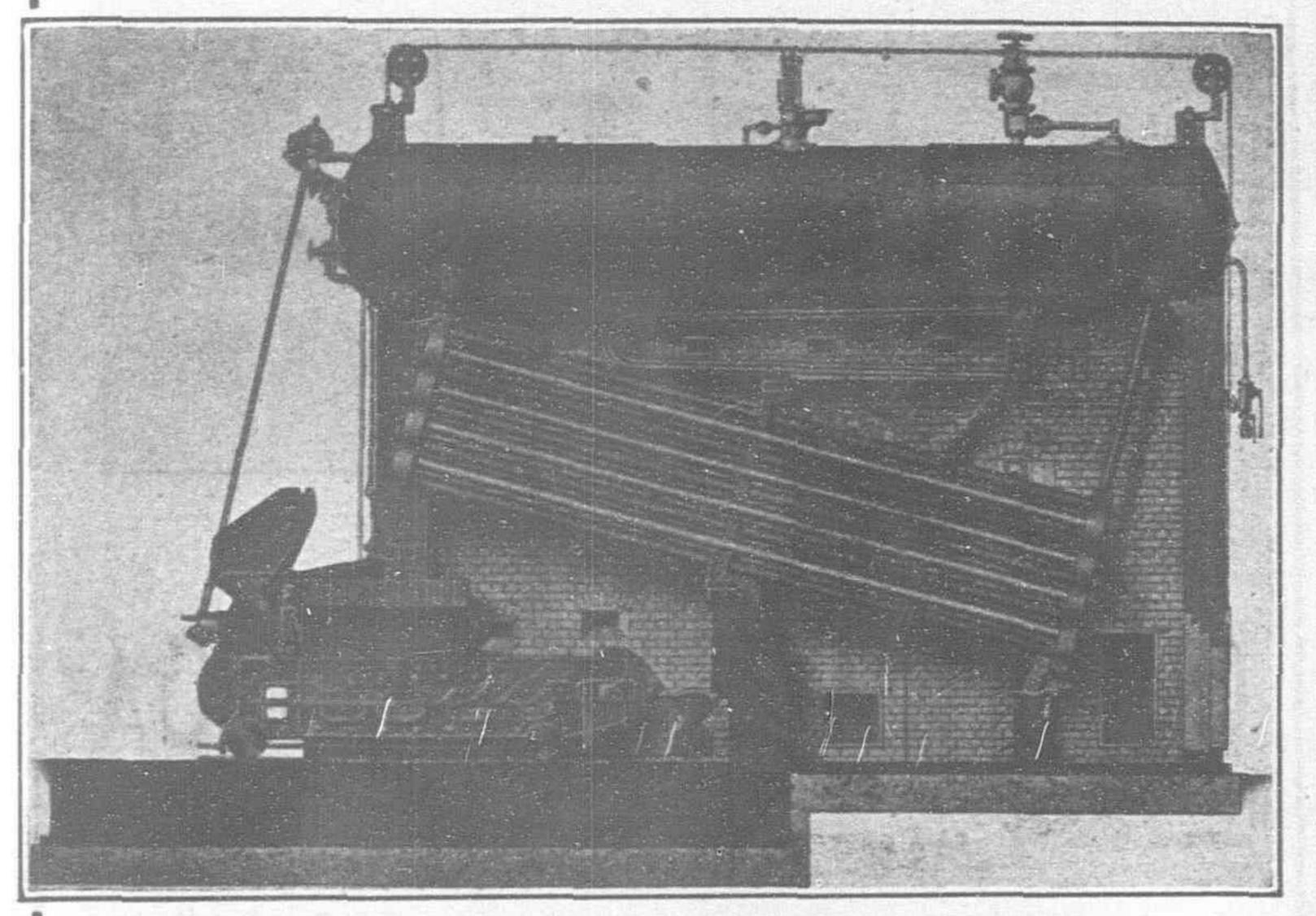
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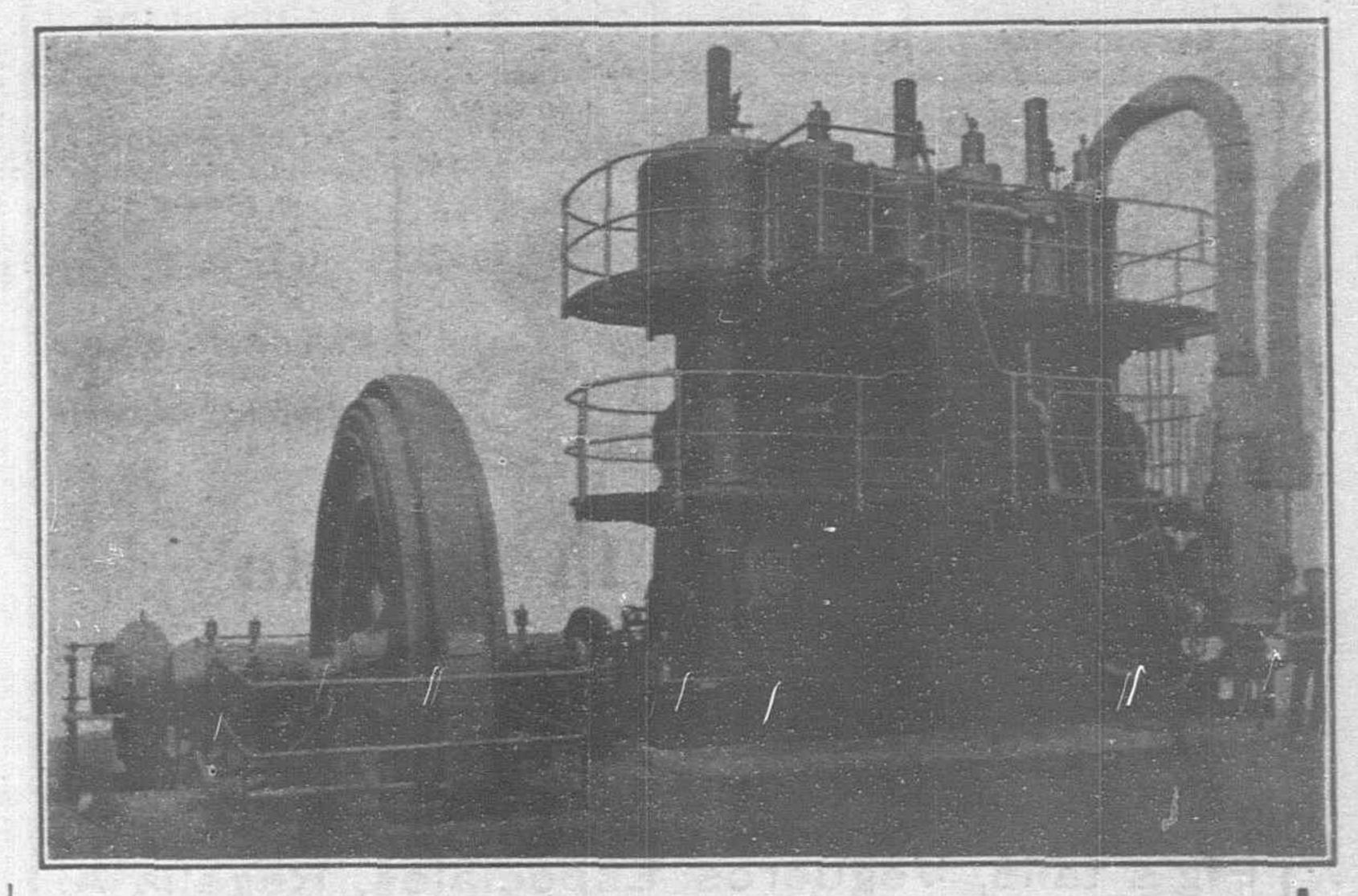
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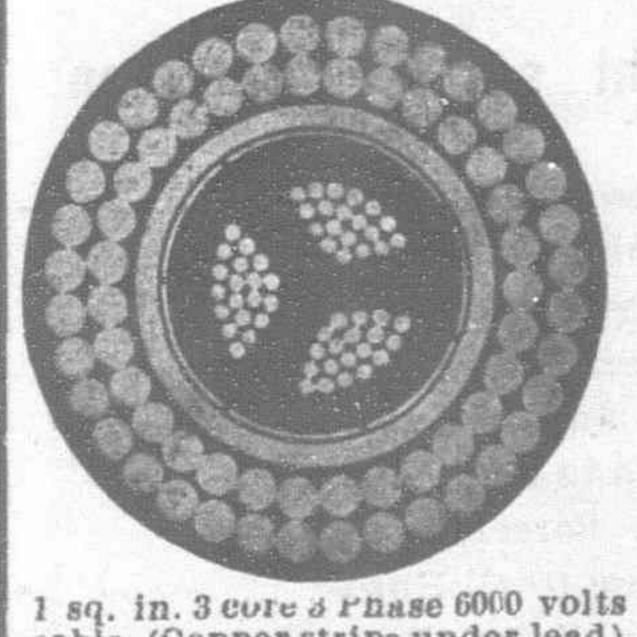
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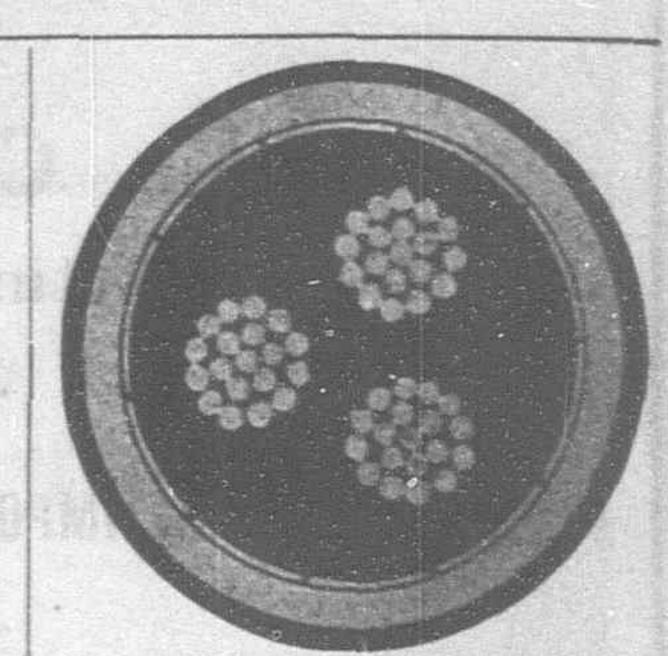


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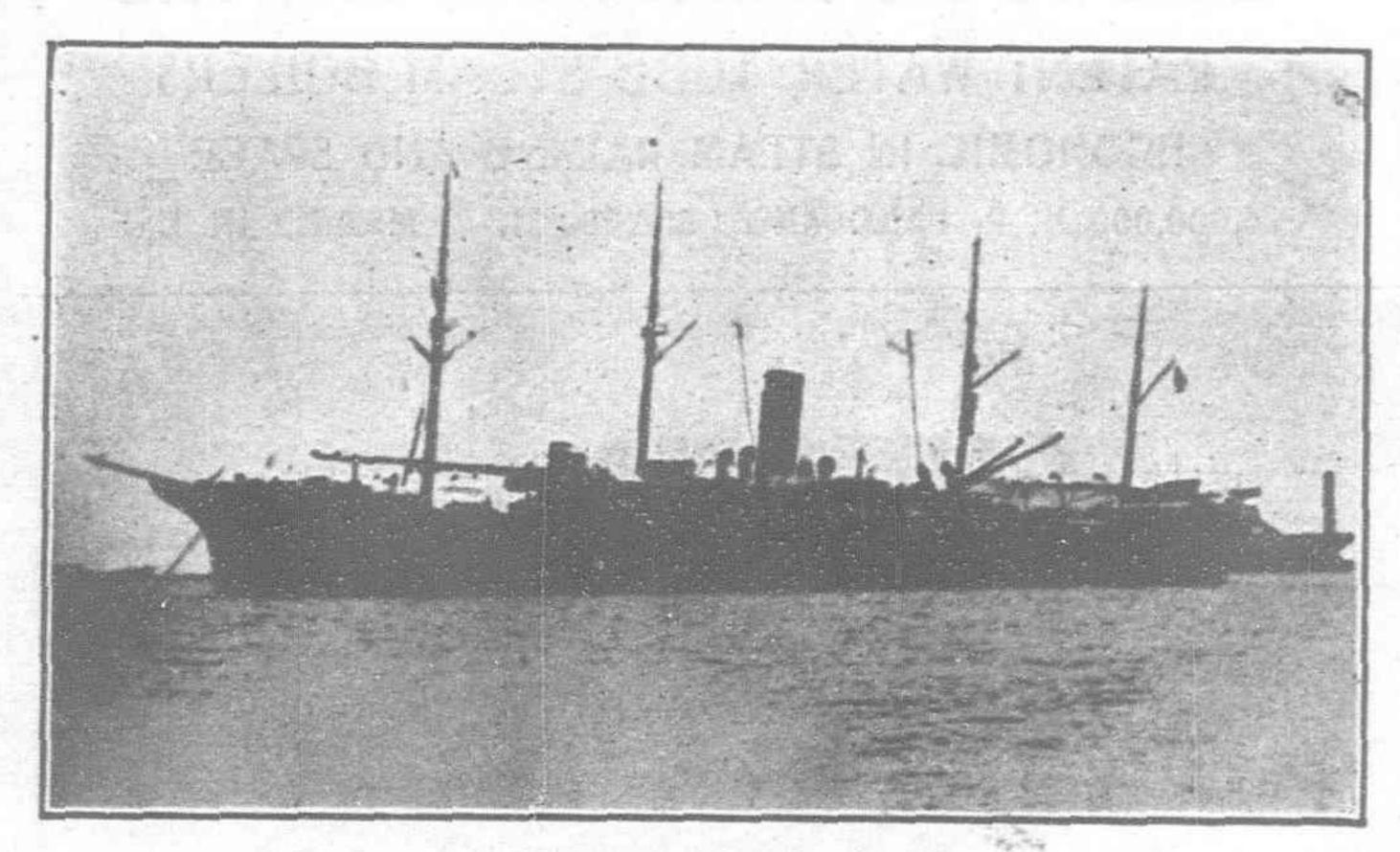
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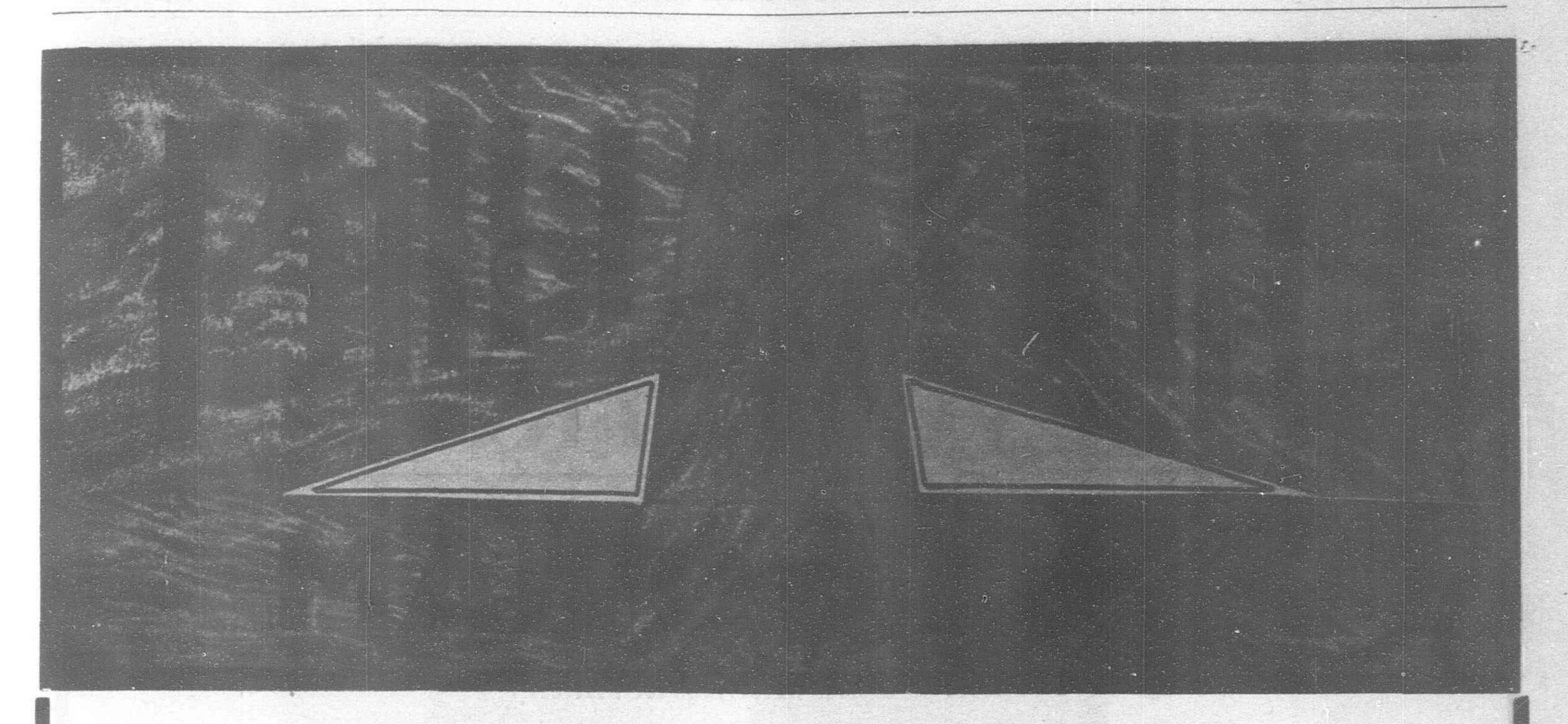
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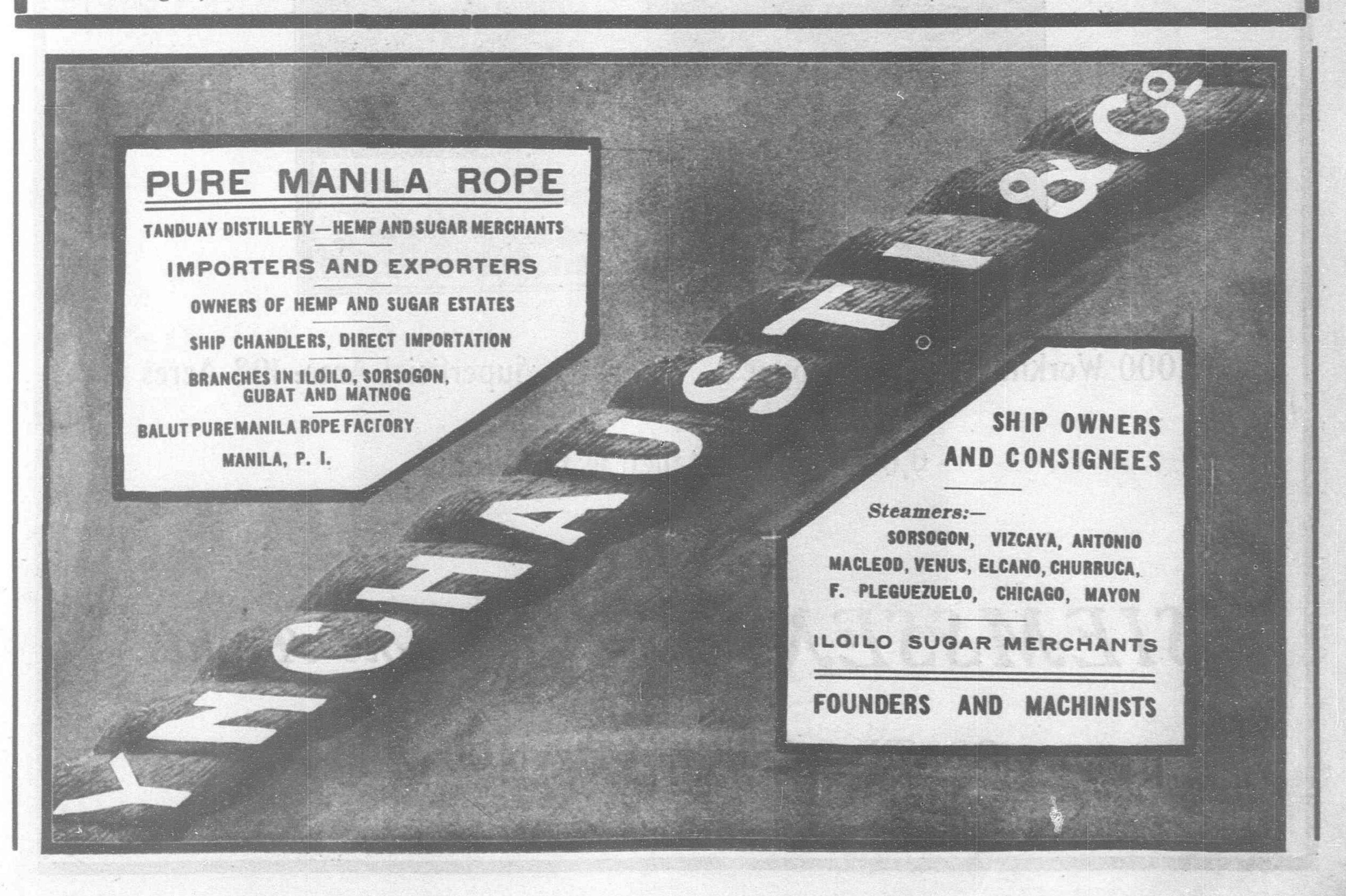
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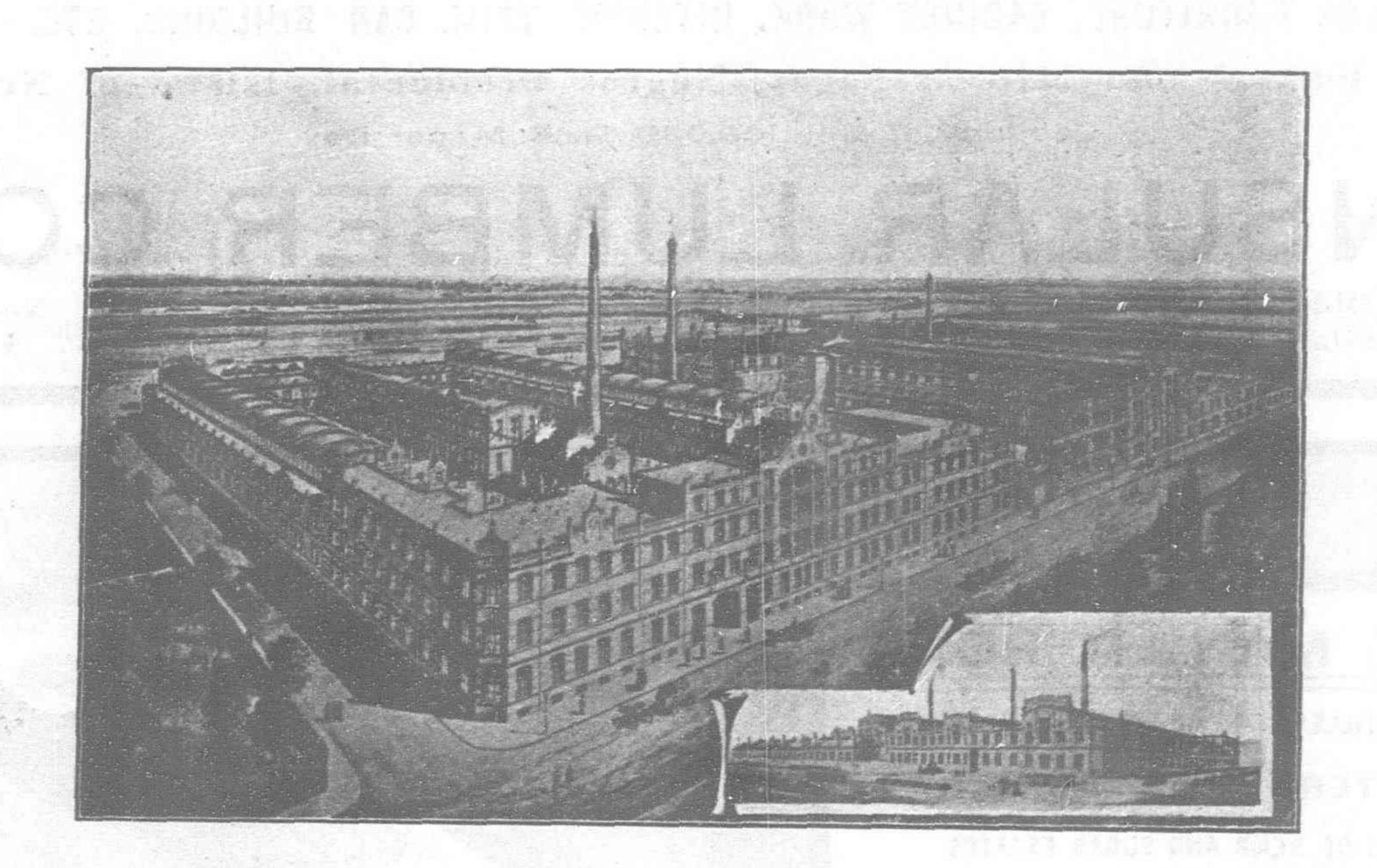


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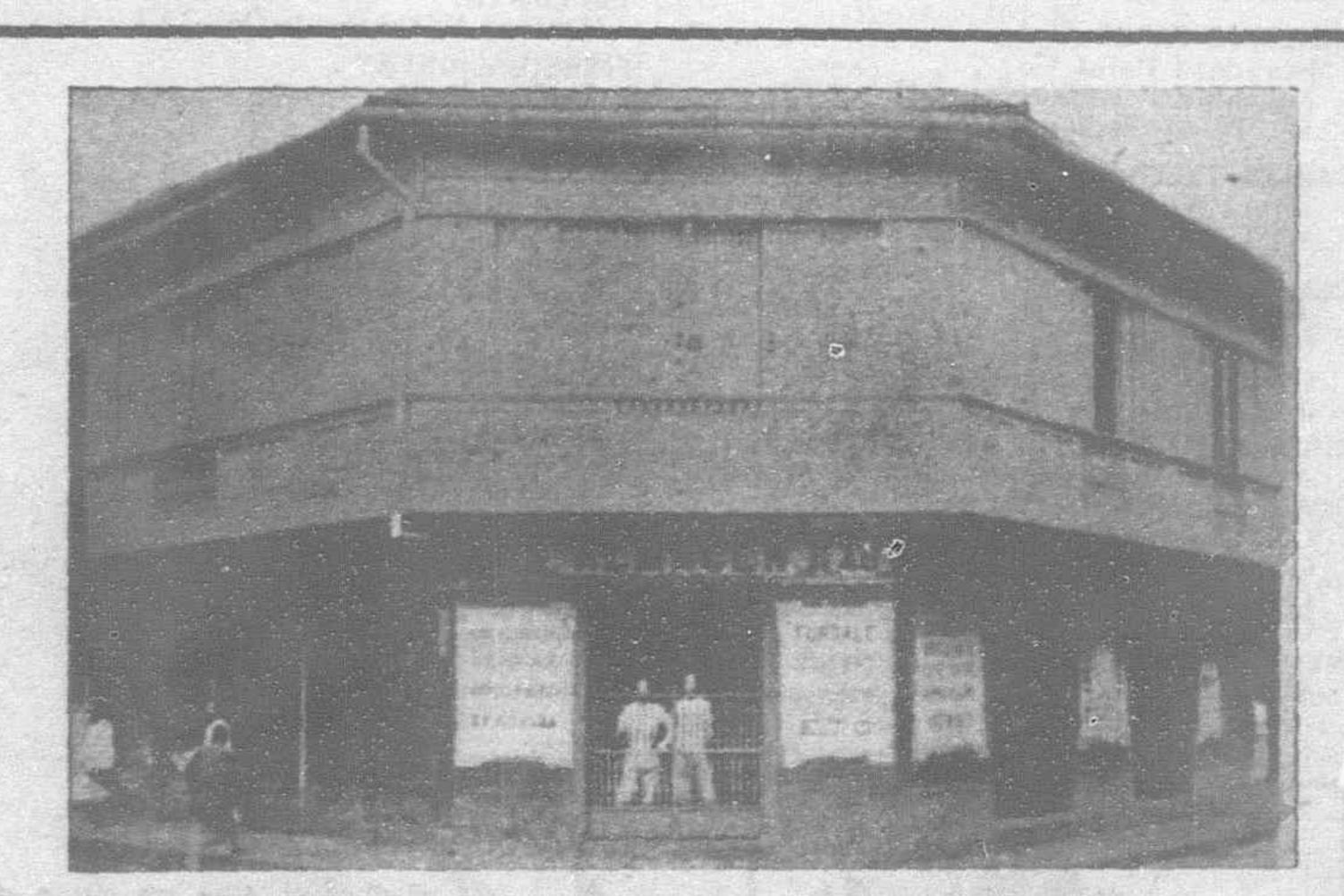
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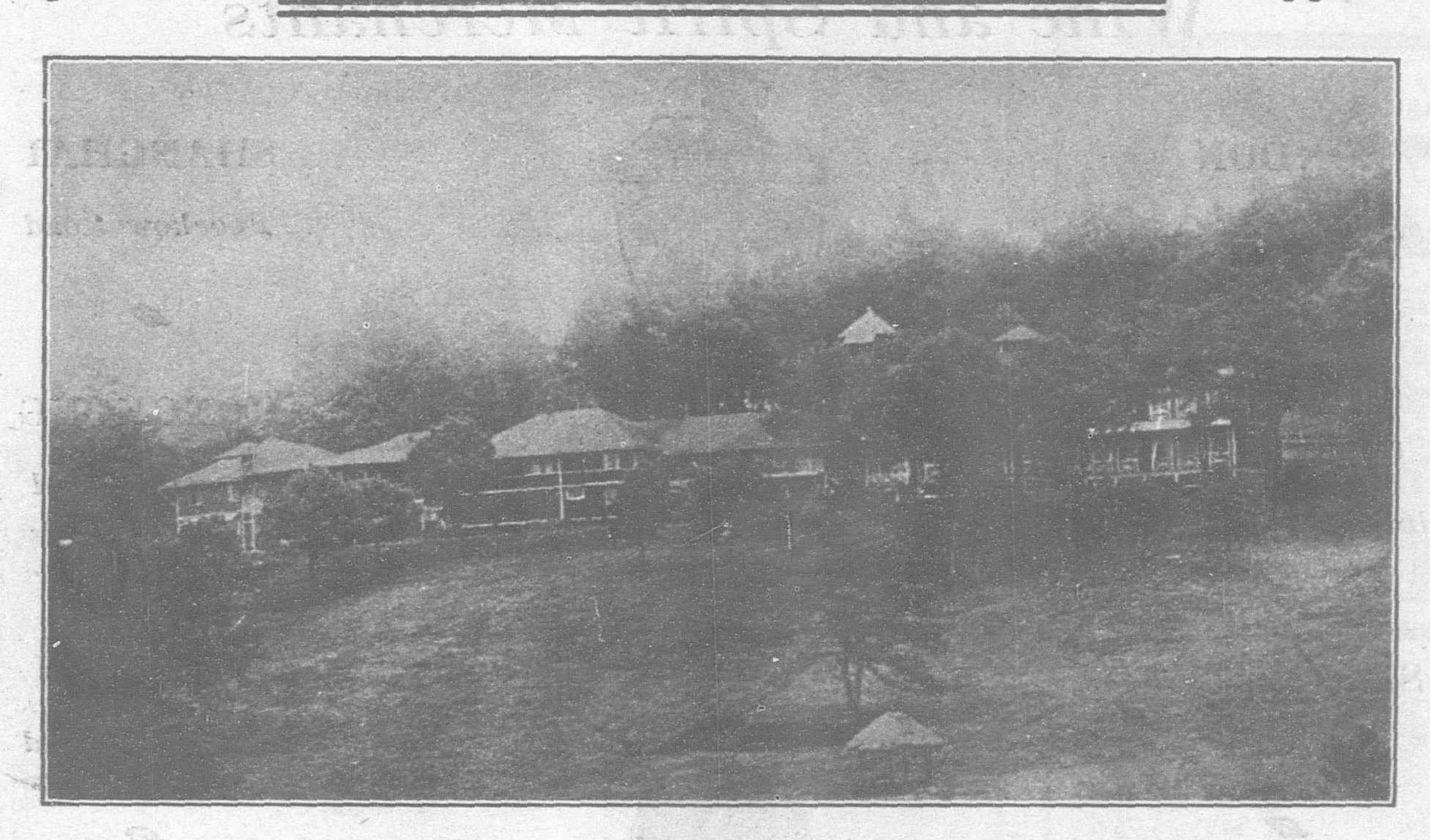
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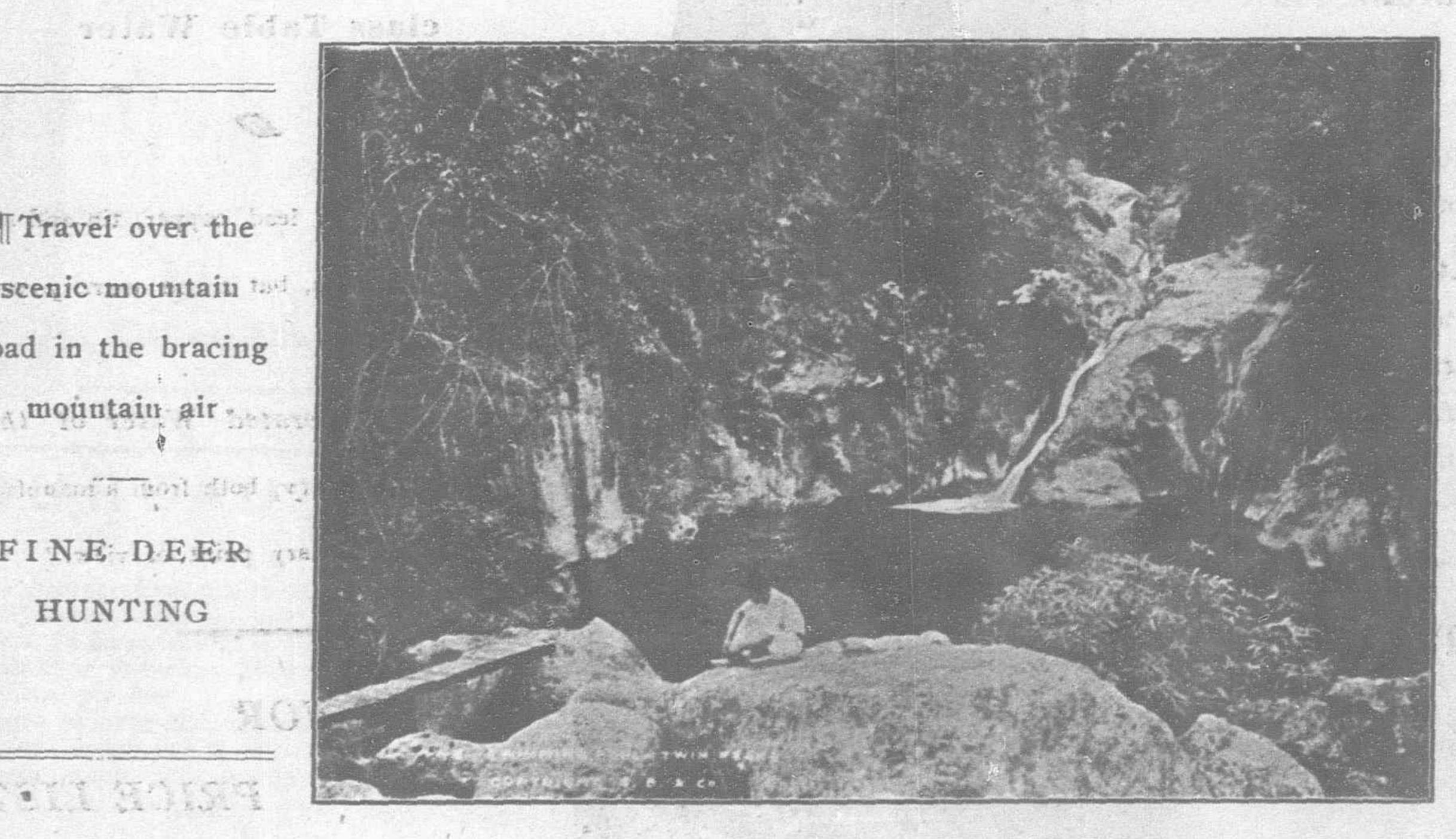
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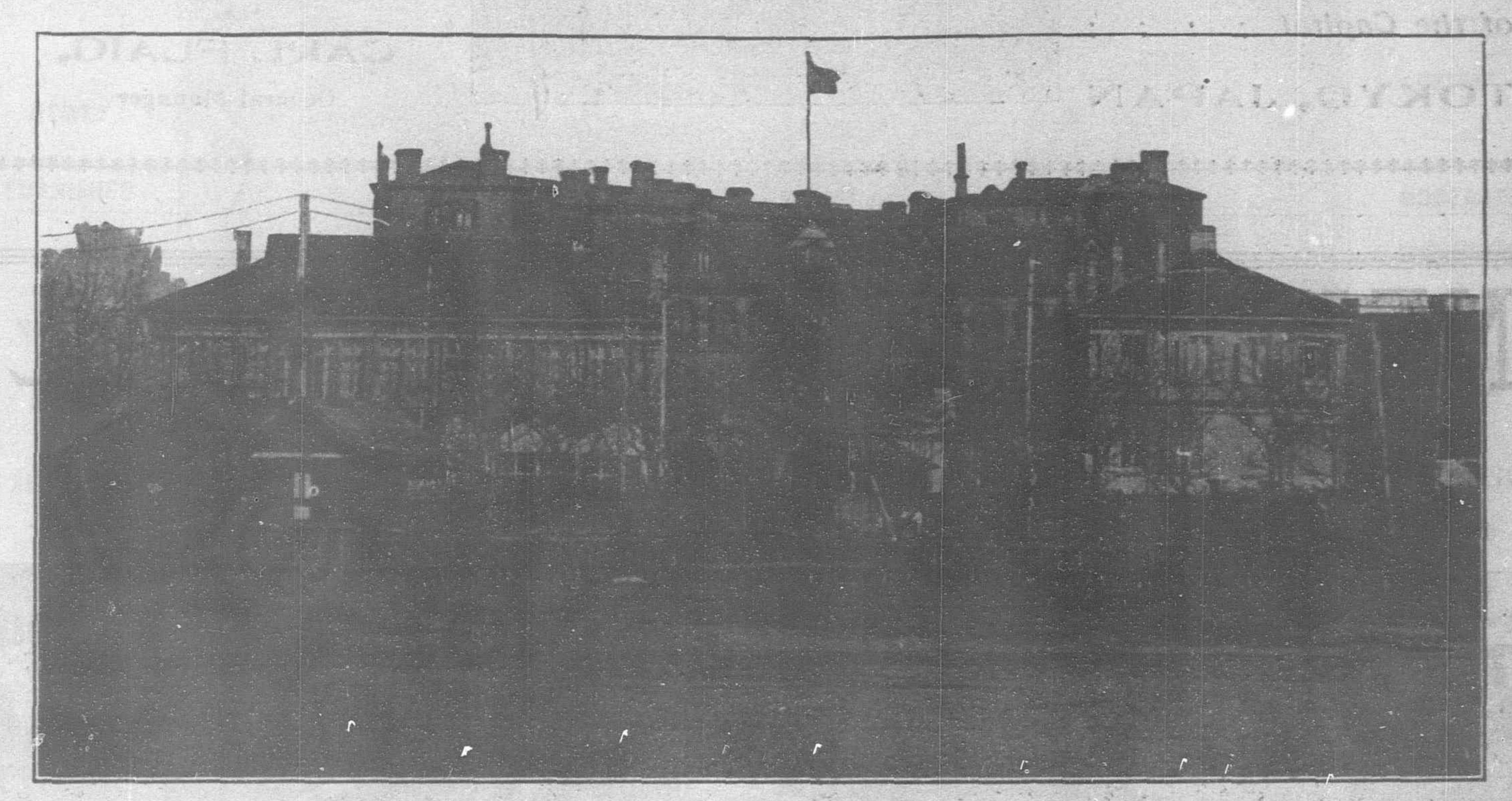
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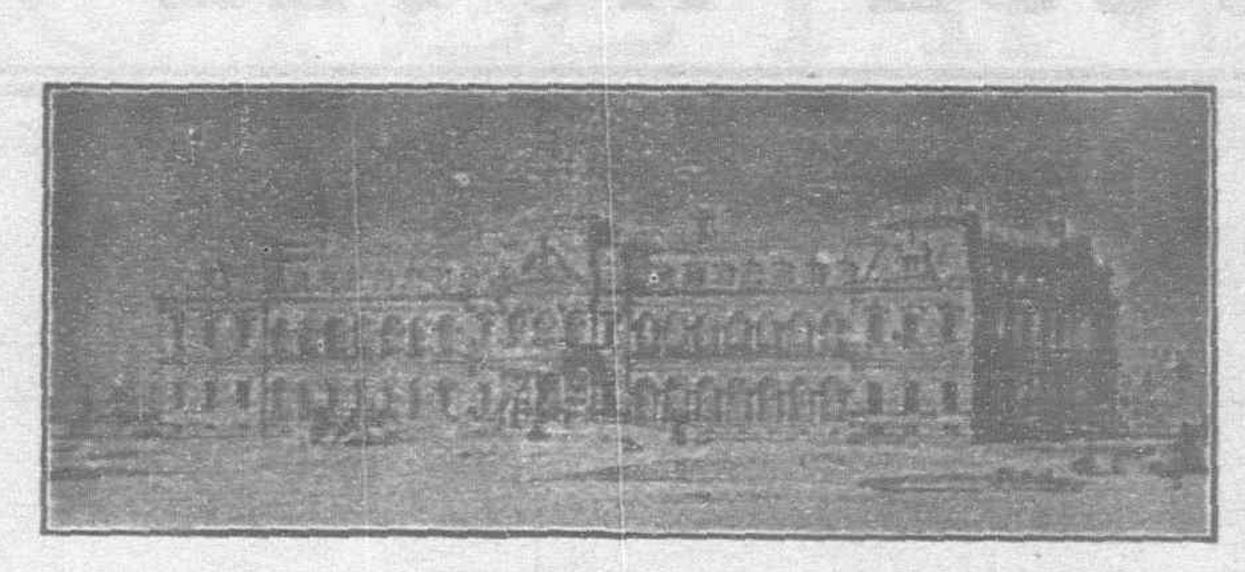
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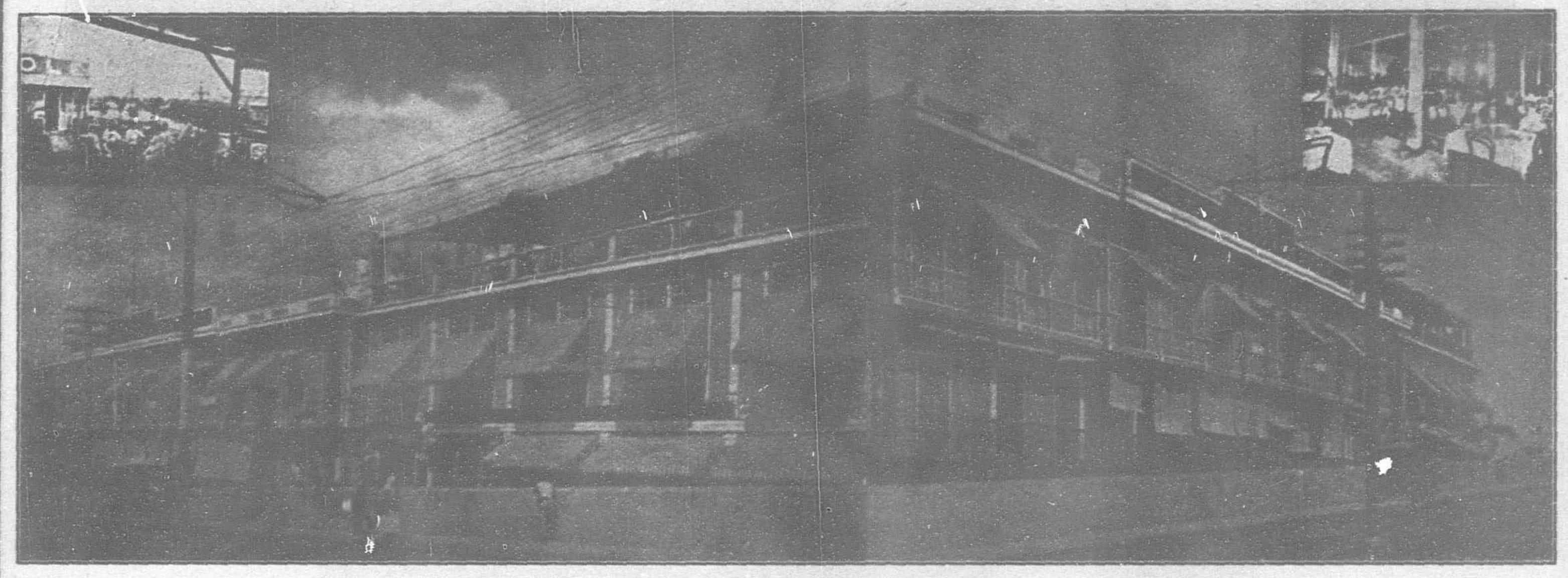
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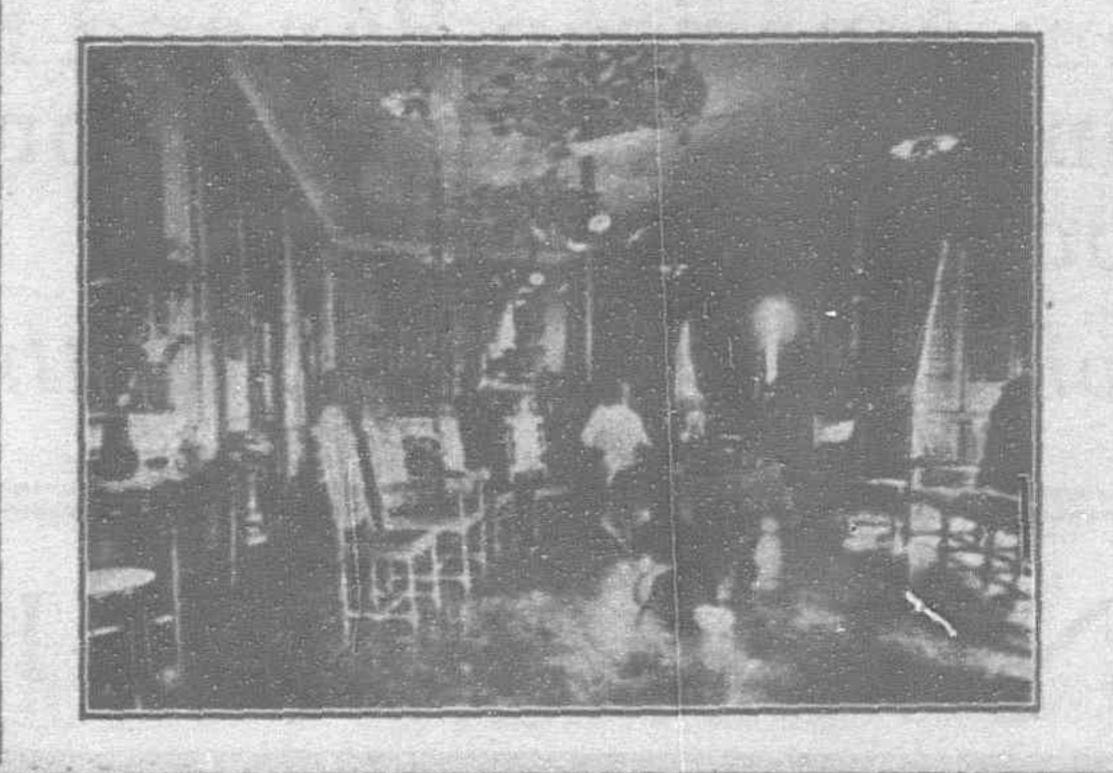
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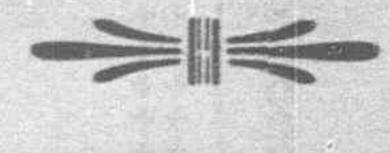
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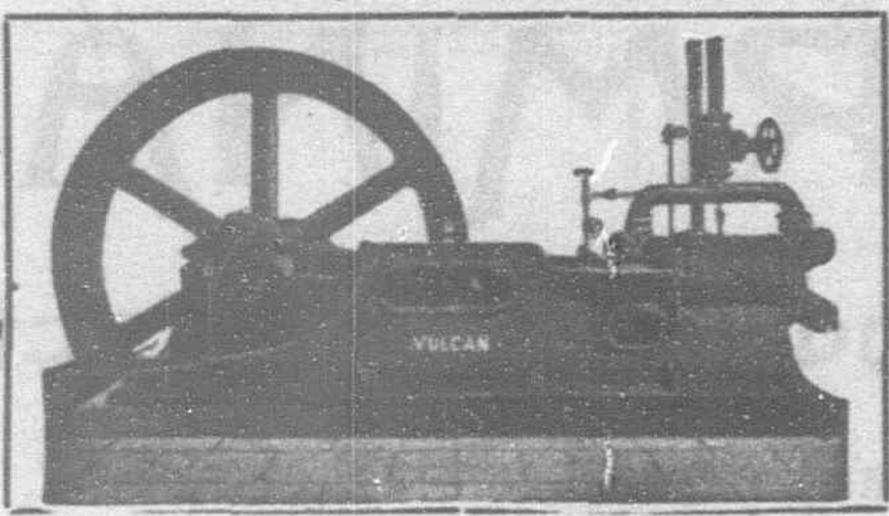
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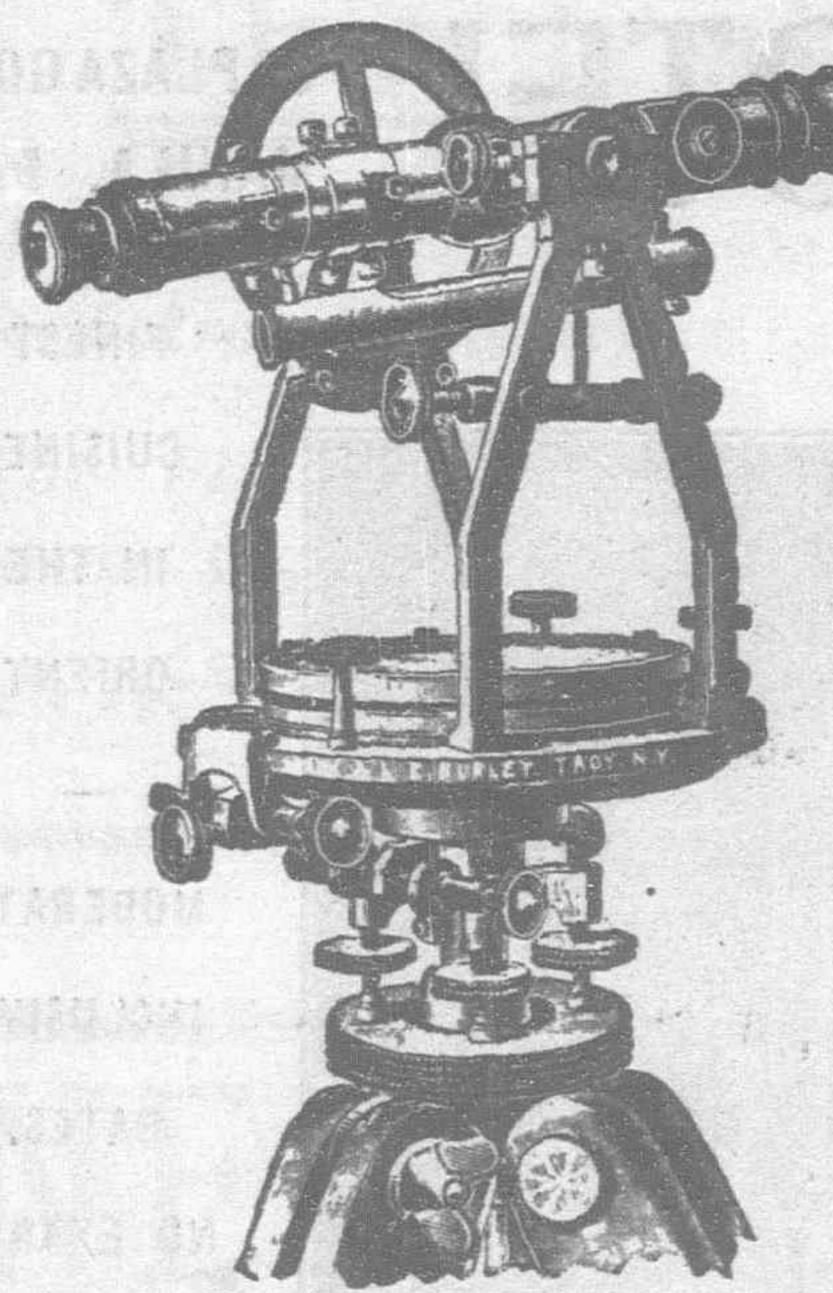
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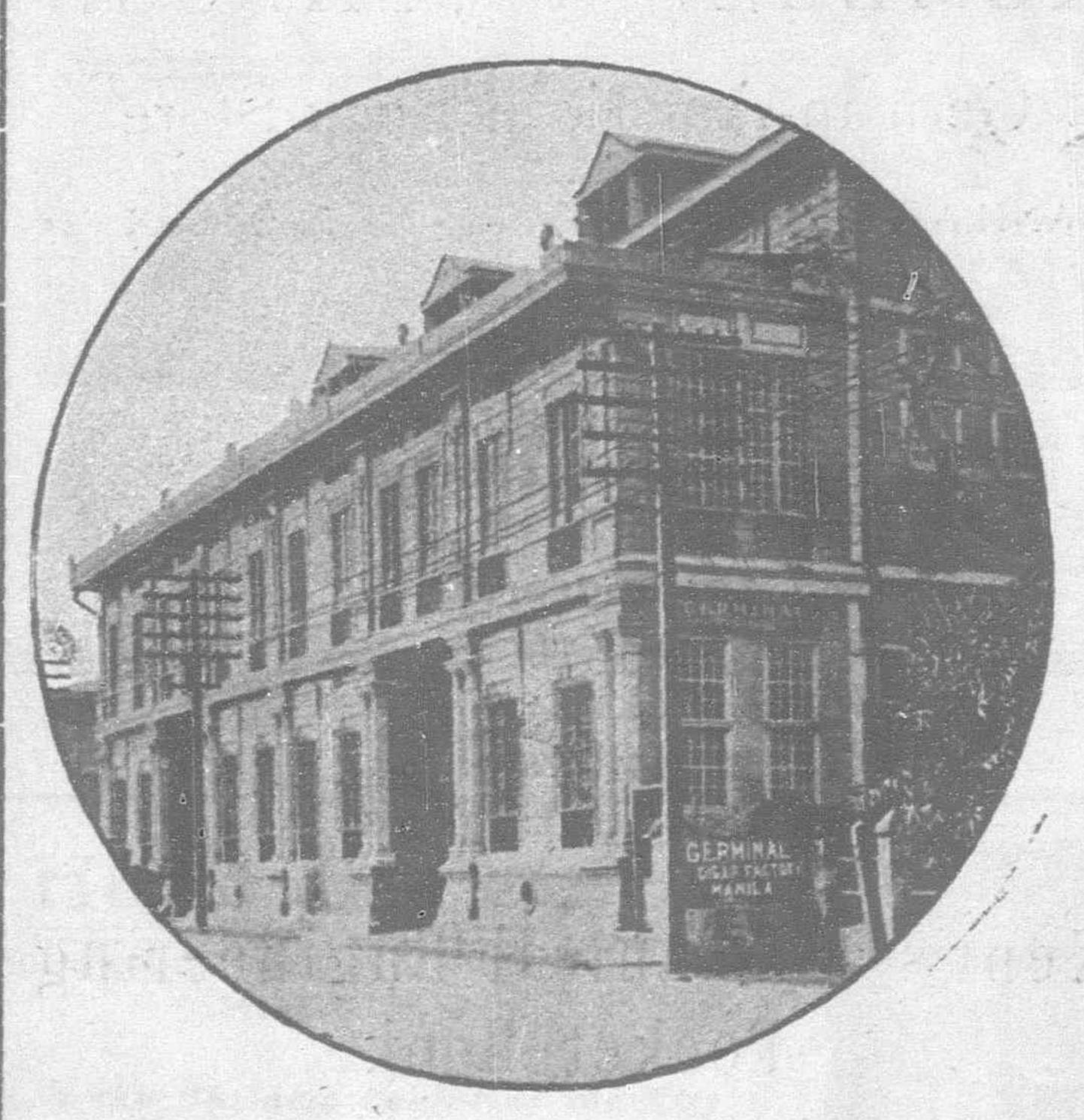
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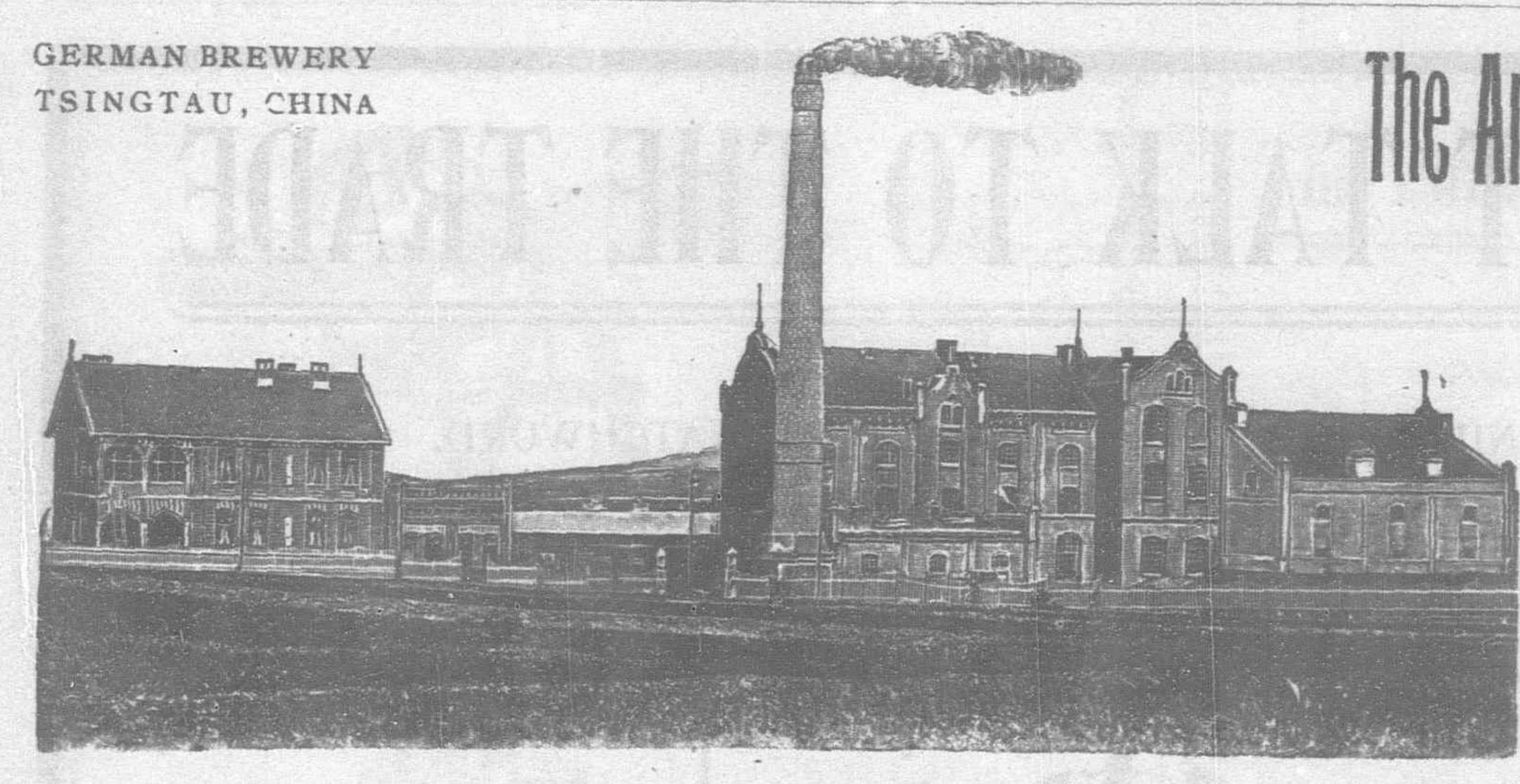
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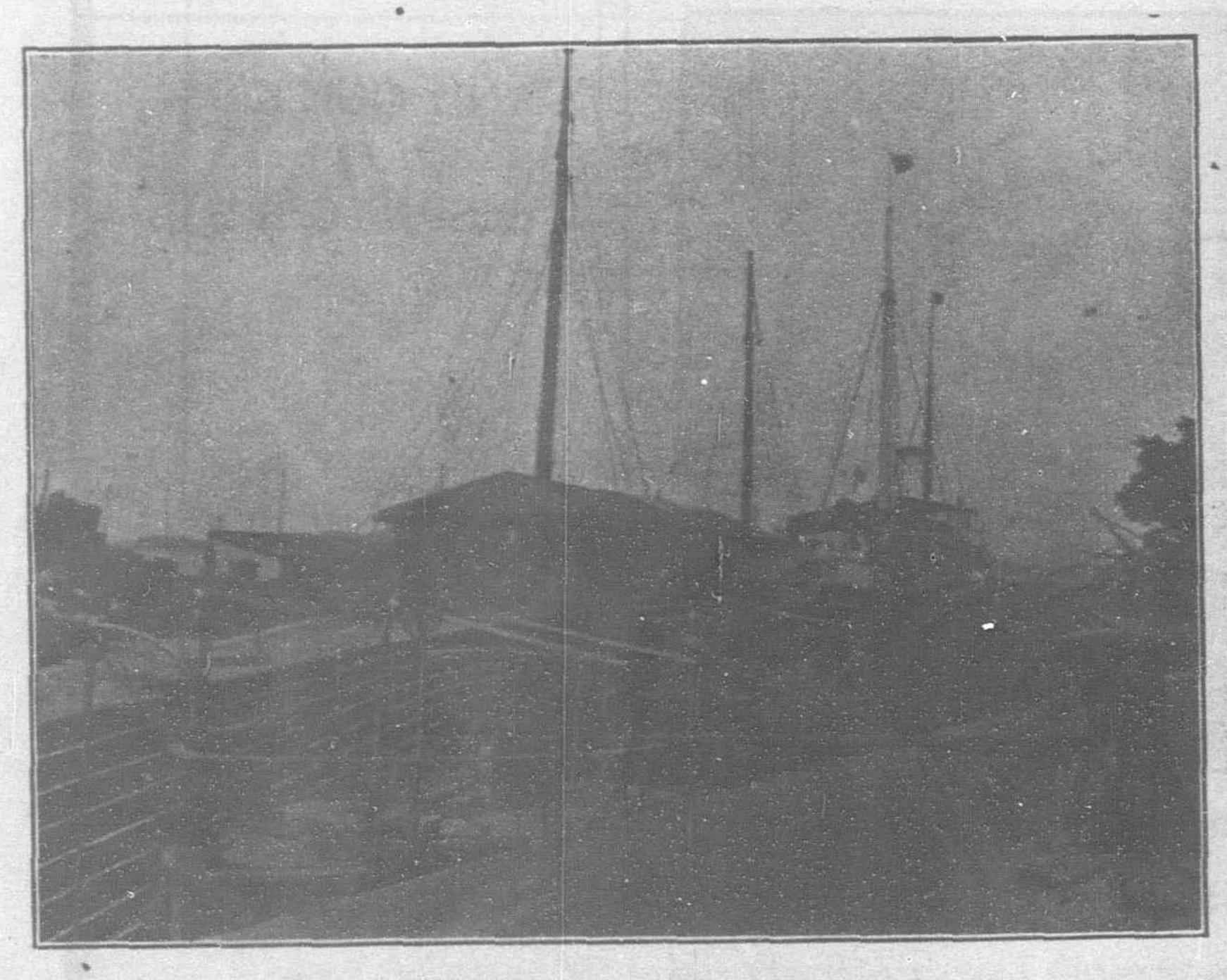


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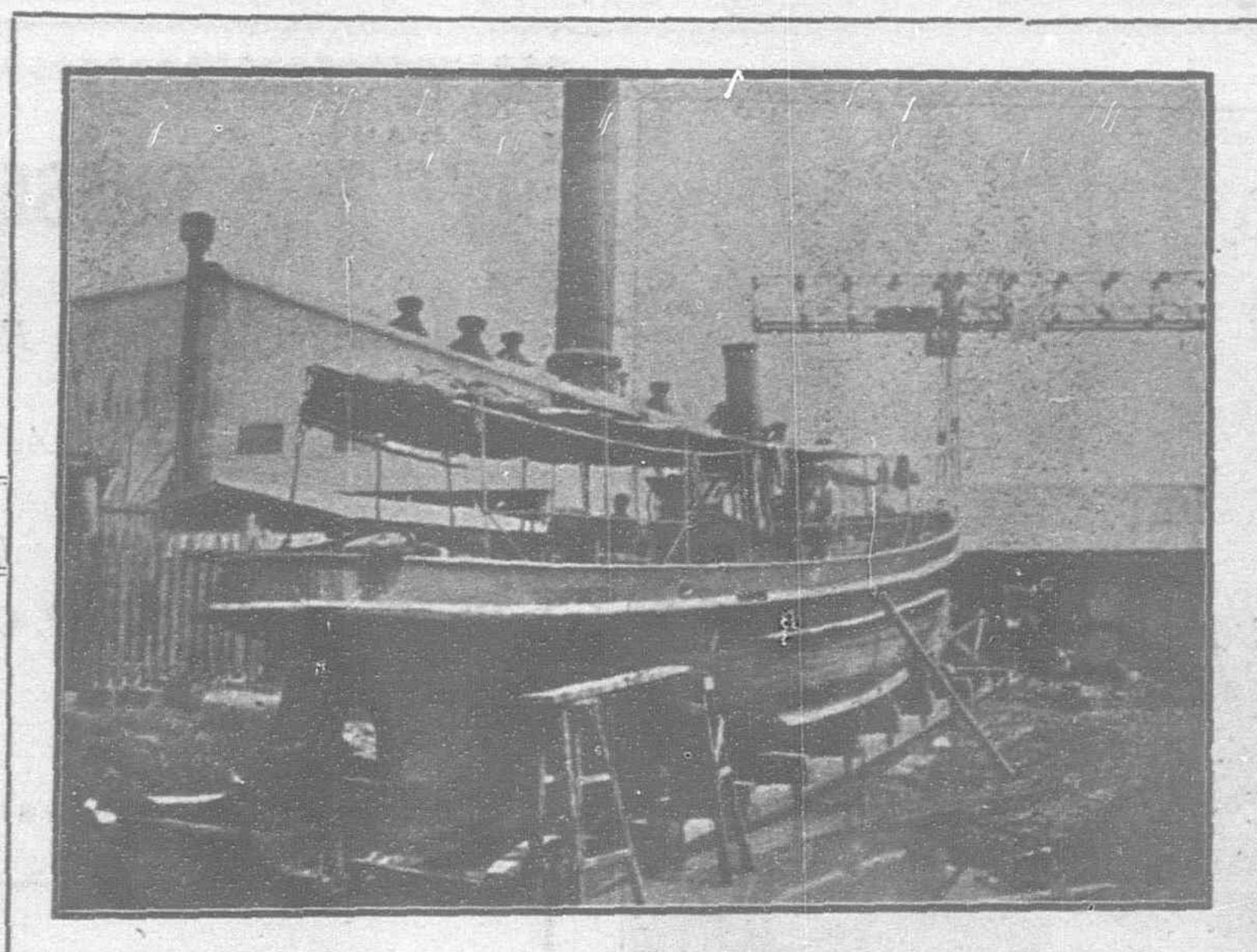
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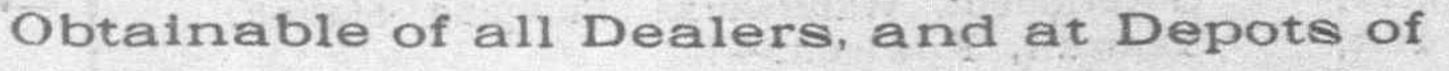
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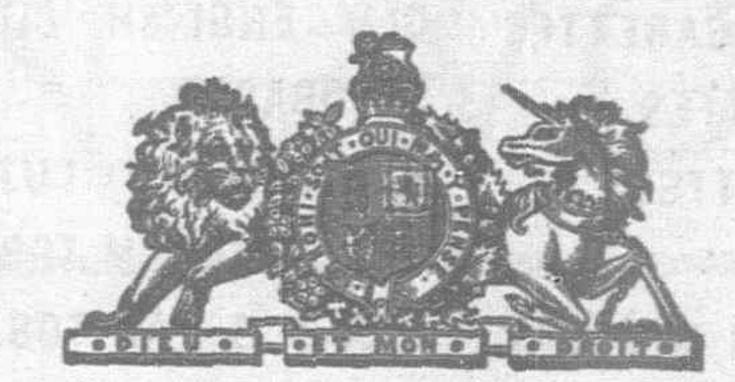
PROPOSALS FOR MINERAL OIL .- Headquar ters Philippines Division, Manila, P. I., April 21st, 1908. Sealed Proposals, in triplicate, subject to the usual conditions, for furnishing 365,000 gallons of Mineral Oil to this Department during the Fiscal Year 1909, will be received at this office until 10:00 a. m., May 21st, 1908, and then opened. Blank forms and information furnished upon application. Envelopes containing proposals should be endorsed, "Proposals for Mineral Oil, to be opened at 10:00 a. m., May 21st, 1908," and addressed to the Chief Quartermaster, Philippines Division, Manila, P. I.

Proposals for Laundry

PROPOSALS FOR LAUNDRY.—Headquarters Philippines Division, Office of Chief Quartermister, Manila, P. I., April 20, 1908. Sealed proposals, in triplicate, subject to the usual conditions, for laundering ship's linen, white coats, blankets, and canvas bunk bottoms for U. S. Army Transports at Manila, P. I., during the Fiscal Year 1909, will be received here until 10:00 a. m., May 20, 1908, and then opened. Blank forms and information furnished on application. Envelopes containing proposals should be endorsed "Proposals for Laundry to be opened at 10:00 a. m., May 20, 1908." and addressed to the Chief Quartermaster, Philippines Division, Manila, P. I.

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PROPOSALS FOR PRINTING .- Headquarters Philippines Division, Office of Chief Quartermaster, Manila, P. I., April 24th, 1908. Sealed proposals in triplicate, subject to the usual conditions, for job and other miscellaneous printing, ruling, and furnishing paper and cardboard for same, necessary at Headquarters Philippines Division and Headquarters Department of Luzon, Manila, P. I., during the Fiscal Year 1909, will be received here until 10:00 A. M., May 23rd, 1908, and then opened. Information and blank forms furnished on application. Envelopes containing proposals should be endorsed "Proposals for Printing, to be opened at 10:00 A. M., May 23rd, 1908," and addressed to the Chief Quartermaster, Philippines Division, Manila, P. I.



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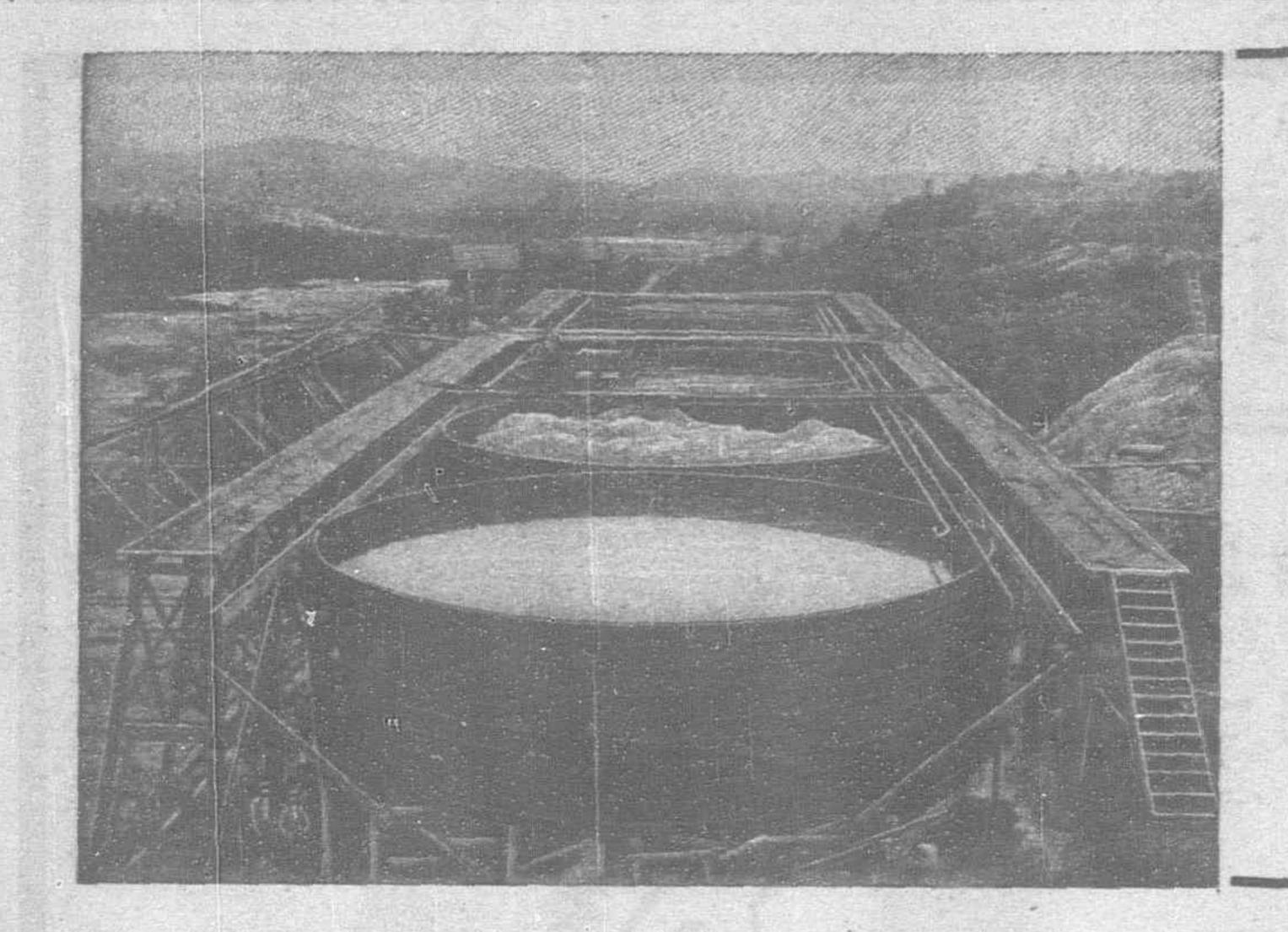
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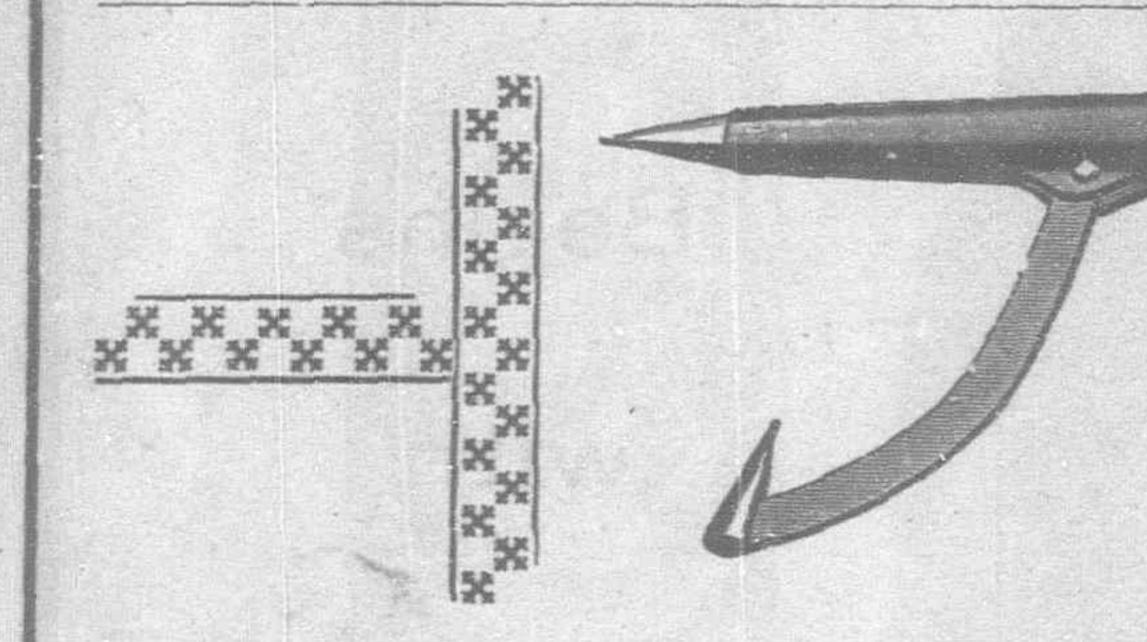
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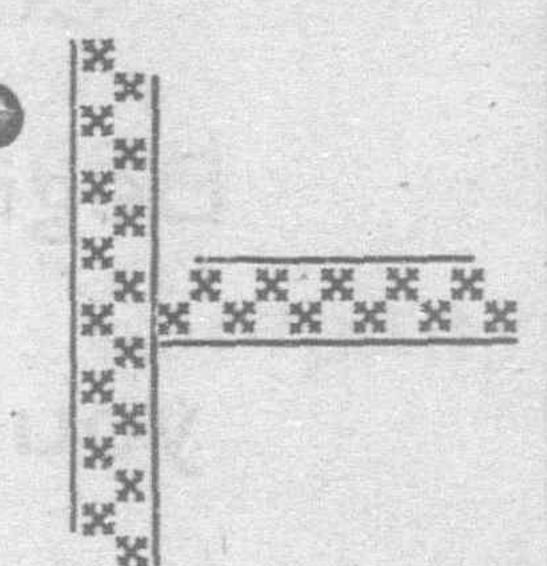
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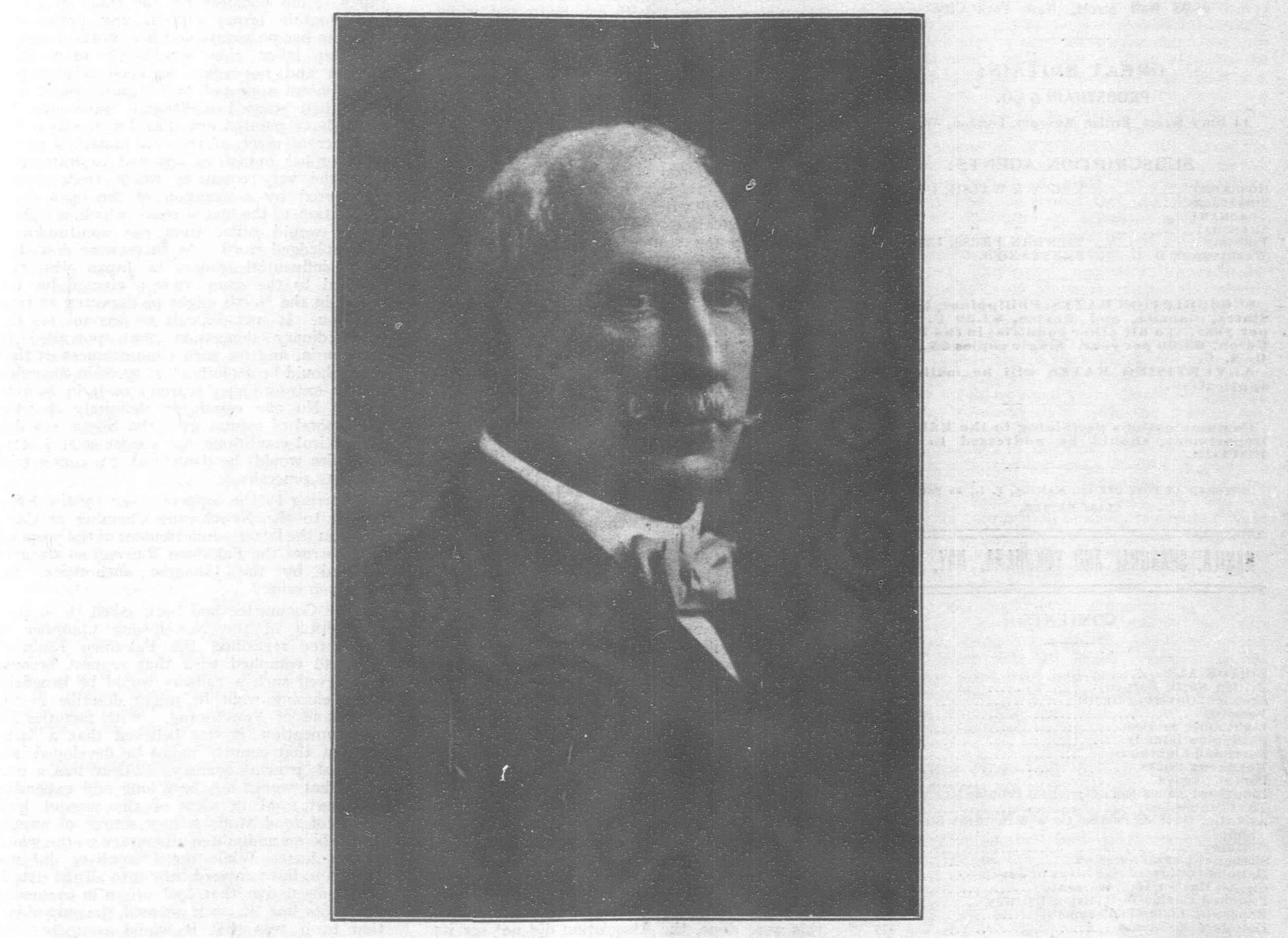
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VOL. IV.

MANILA, P. I., SHANGHAI, AND YOKOHAMA, MAY, 1908

No. 12.



H. E. EDWARD PEREGRINE GUERITZ Governor of British North Borneo

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Mr. Anthony R. Tuohy, the business manager of the FAR EASTERN REVIEW, has resigned his position, after being identified with the publication for over two years. During that time he was unsparing in his efforts to serve his clients and it is with regret that the management received the intimation of his desire to retire from the direction of the business department.

Mr. Tuohy leaves soon on a visit to the United States where he goes in search of

health.

Mr. George Bronson Rea, the publisher, is on his way from New York to give his personal attention to the management in the Far East.

THE CHINA ASSOCIATION

The speech of Mr. F. Anderson, who presided at the annual general meeting of the Shanghai Branch of the China Association held at the Shanghai Club, Shanghai, April 27, is of peculiar interest at this time as voicing the views of the leading British association in the Far East on important questions affecting foreign trade. His reference to the protection of foreign trademarks, the open door in Manchuria and the Fukumen Railway question indicate the trend of opinion among British merchants and, while conservative and consistent, is to the point. In regard to trademarks in China, according to the N. C. Daily News, he said in part:

"When the Committee's opinion about the

matter was asked, it suggested that there appeared to be no special urgency for this question being pressed at the present moment, as many other clauses of the Mackay Treaty were of more vital importance to the welfare of China and China's trade, especially those clauses relating to currency and the compilation of mining regulations. The Committee pointed out that a few simple stipulations should be made in any convention concluded with the Chinese government, such as that a trade mark was a valuable property which belonged to those who established it; that the owner of that mark might reasonably look for the protection of his rights, and that if there were more than one claimant for any registered trademark, priority of usage should be recognized and respected. He understood, however, that some difficulties had arisen owing to the laws of Japan. The committee for example believed that if a Japanese succeeded in registering a foreign trademark—probably one that had never been used in Japan, but only in China—he was entitled to use it, and would probably do so, if it were a valuable one, on inferior goods. It was also possible for a Japanese subject to register a foreign trade mark in Japan if he made some slight alteration, perhaps by putting in the wording "Made in Japan." In either case, if the trade mark could not be upset in a Japanese court—and there was some difficulty in upsetting a trademark in a Japanese court—it became the unassailable property of the man who had pirated it. In these circumstances it must be against British interests in China to make a convention in which the conditions mentioned above were not recognized. Japanese law did not appear clearly to recognize the difference between meum and tuum when foreign rights were assailed by their countrymen, and if this were so, their laws seemed unfair to other countries. The committee believed that when the true state of Japanese law, and its effects upon residents in China were pointed out to the Japanese government, the Japanese would alter their laws of their own accord. Unless this were done, the Association did not see its way to concur with the conclusion of any convention with China under which British property would be liable to confiscation."

In reference to the Open Door in Manchuria,

he said:

"The Committee had made representations to London on the subject of the prolonged delay in re-establishing what was known as the Open Door in Manchuria. In doing so it had not been unmindful of the fact that Manchuria had only lately been the field of battle, and that difficulties must be expected

to arise in carrying out the terms of such an agreement as the Treaty of Portsmouth. It seemed to the Committee that the trend of events appeared to indicate that the policy of the Japanese administration and officials had been directed towards the establishment of preferential claims for Japanese trade, and the discouragement of other foreign competition, leading to a state of affairs that would become a revival of the "sphere of influence" regime in the Northern provinces. It was possible that this was partly due to an excess of zeal on the part of Japanese officials, but it was felt that there were good grounds for calling attention to the delay in fulfilling treaty obligations-not in any hostile spirit, but in the belief that if representations in this sense were made to the proper authorities of a great nation like Japan there could be no question but that those obligations would be carried out. He remembered some years ago hearing this question discussed by a gentleman who occupied an important position in the service of Japan. He said that those people who distrusted Japan's adhesion to the open door policy did not give his countrymen credit for common sense or for being clear headed; they knew that claims to preferential rights in trade would alienate friendly nations and would give rise to complications but that, as Japan could compete for the trade of China on favorable terms without any preference, owing to her proximity and her plentiful supply of cheap labor, they would rely upon their natural and not upon artificial advantages. These views appeared to be quite sound and if he had wanted additional arguments, he might have pointed out that Japan was not a producer of much of the raw materials necessary for her industries but had to draw them from the very countries whose trade would be injured by a negation of the open door, in addition to the loss of credit which any great nation would suffer from the non-fulfilment of its pledged word. As there were doubtless many influential leaders in Japan who still adhered to the same view a change for the better in the North might be expected as time went on. It was difficult to account for the extraordinary depression that prevailed in Manchuria, and for such circumstances as that there should be a plethora of sycee in Shanghai and an extraordinary scarcity of it in Newchwang. No one could say definitely that the withdrawal of capital from the North was due to political conditions, but a more settled state of affairs would be beneficial to commercial interests generally."

Referring to the support given by the Association to the Newchwang Chamber of Commerce in the latter's endorsement of the proposal to construct the Fakumen Railway so strongly opposed by the Japanese authorities, Mr. Anderson said:

"The Committee had been asked to support the action of the Newchwang Chamber of Commerce regarding the Fakumen Railway, and had complied with that request because it believed such a railway would be beneficial in developing what he might describe as the hinterland of Newchwang. With facilities for communication it was believed that a large area of that country might be developed into a wheat growing country. Wheat was a produce that would not bear long and expensive transport, and in view of the present high prices of food stuffs a new source of supply would be an undoubted advantage to the whole of the East. While the Committee did not profess to have entered fully into all the details of the discussion that had arisen in connexion with this line, if, as it seemed, the only objection to it was that it would compete with the main Japanese line, that was a difficulty that might be overcome by building the railway a few miles further away. The British objection to the building of a line parallel to the Kowloon and Canton line was hardly on all fours with the Fakumen railway; the proposed line in the South was only four miles distant from the one the British and Chinese Corporation were building, whereas the Fakumen railway was some thirty-five miles distant from the main Japanese line at its nearest point. It was not quite apparent how the Japanese feared competition from the proposed line, more especially as China, after she had built railways, imposed heavy likin taxation on the cargo carried by them, while it was understood that no likin was charged on the Japanese line. If the difficulties in the way of the construction of the Fakumen line could be overcome either by mutual agreement or arbitration it was the Committee's belief that both Japanese and foreign trade would benefit considerably. If the Chinese Government were urged to improve the navigation of the Liao River this would afford an additional means of communication in Manchuria."

Referring to the unfavorable local conditions in the Chinese provinces the speaker said:

"It could not be doubted that not only on fiscal questions, but also in mining regulations in industrial progress, in the currency question, in railway development and even in defensive services, many of the leading men of the provinces acted as if they believed imperial and provincial interests were antagonistic, with the result that progress was handicapped everywhere. There was something to be said in favor of the present system from the local point of view; the population had a great deal of freedom and of local independence, but it hardly admitted a doubt that a rapidly growing population must have increased opportunities for employment and of earning a livelihood; otherwise there would be trouble. The movement to bring about a change could only be successfully controlled by a strong central authority. The fact was that China was an awful example of the dissipation of strength resulting from a gigantic system of home rule. In China there were about a dozen different states in which the supposed interests of the provinces were paramount, and the only hope for national progress lay in the Imperial government controlling national affairs."

Referring to the obstruction by local officials to the carrying out of national promises affecting private British interests the chairman said:

'During the past year the committee had not been called upon to make representations on behalf of private interests regarding the bad faith of the Chinese government in placing obstacles in the way of people who have done their best to work on amicable terms with the Chinese for the development of the country in various directions, but it was known that such cases existed, and they were anything but creditable to the reputation of China for honesty and fair dealing. Obstruction by local officials after promises had been made by the imperial government was persistent and the end of it was that all enterprise was tired out by constant obstacles and constant delay. If the local officials could only realize the harm done the country by these tactics the speaker believed that their policy would be entirely changed.

In reporting the details of the meeting, the North China Daily News states the presiding officer's address was greeted with applause.

Certain it is that Mr. Anderson's remarks could be read with benefit, not only by the British foreign office, but by the leaders of thought in Japan and in the undeveloped provinces of the empire of China.

PREHISTORIC WATER SUPPLY

Under the title "Neolithic Dew-Ponds and Cattleways" Arthur John Hubbert, M. D., and George Hubbard, F. S. A., have furnished a volume on the prehistoric methods used in securing a water supply in sections where it was impossible to secure it from natural sources or wells or where it became necessary for defense to live on elevated territory. As has been found, many of these earthworks were built ou chalk formations, the only available water supply being the dew-pond which is described by the authors as follows:

"We are not aware that the thermodynamics of a dew-pond have ever been elucidated, and it is evident that this cannot be done until the construction of such a pond is understood. There is still in this country at least one wandering gang of men (analogous to the medieval bands of bell-founders, masons, etc.) who will construct for the modern farmer a pond which, in any suitable situation in a

sufficiently dry soil, will always contain water. This water is not derived from springs or rainfall, and is speedily lost if even the smallest rivulet is allowed to flow into the pond. The gang of dew-pond makers commence operations by hollowing out the earth for a space far in excess of the apparent requirements of the. proposed pond. They then thickly cover the whole of the hollow with a coating of dry straw. The straw in its turn is covered by a layer of well-chosen, finely puddled clay, and the upper surface of the clay is then closely strewn with stones. Care has to be taken that the margin of the straw is effectively protected by clay. The pond will gradually become filled with water, the more rapidly the larger it is, even though no rain may fall. If such a structure is situated on the summit of a down, during the warmth of a summer day the earth will have stored a considerable amount of heat, while the pond, protected from this heat by the non-conductivity of the straw, is at the same time chilled by the process of evaporation from the puddled clay. The consequence is that during the night the moisture of the comparatively warm air is condensed on the surface of the cold clay. As the condensation during the night is in excess of the evaporation during the day, the pond becomes, night by night, gradually filled. Theoretically, we may observe that during the day the air being comparatively charged with moisture, evaporation is necessarily less than the precipitation during the night. In practice it is found that the pond will constantly yield a supply of the purest water.

"The dew-pond will cease to attract the dew if the layer of straw should get wet, as it then becomes of the same temperature as the surrounding earth, and ceases to act as a non-conductor of heat. This, practically, always occurs if a spring is allowed to flow into the pond, or if the layer of clay technically

called the 'crust' is pierced."

The knowledge ought to prove valuable to military officers having charge of active campaigns 'where often the lack of water not only interferes with important movements but increases the hardships and suffering in many necessary operations.

THE HONGKONG TYPHOON REFUGE

It is evident the China Mail is not doubtful of Hongkong's future, and believes that no expense should be spared to protect the shipping of the port since upon its predominance as a maritime center, that future depends, we reproduce the comments of that estimable journal on the proposed expenditure of one and one-half million dollars in building a breakwater at Mong-kok-tsui, recently approved by the Hongkong government and believed to be too expensive by the committee of the chamber of commerce. The Mail says:

"We propose now to consider the point raised by the Committee of the Chamber of Commerce as to whether so large an expenditure is necessary. It may, perhaps, be as well for us to give a general outline of the question for the benefit of those who are not conversant with its details. The Causeway Bay Breakwater, built in the early eighties, is the only typhoon shelter available for the vast amount of small craft plying in the harbour. It has an area of 62 acres. Situated as it is at the eastern end of the harbour it is directly to windward and therefore difficult of access in the case of three typhoons out of four, owing to the well-known fact that most of the typhoons which affect the Colony pass to the south of us causing an easterly gale at the beginning of the blow. Constructed over 20 years ago it is only to be expected that it should now be inadequate to meet the requirements of so rapidly growing a port as Hongkong. Its inadequacy affects us prejudicially in more ways than one. Not only are boats crowded out and thus left to the mercy of the winds and waves, but owing to the fear of being thus crowded out, they leave their work long before there is any necessity for them to do so and thus cause delay to the shipping in the harbour and loss to its owners. From time to time proposals for additional typhoon shelters have been put forward. In 1900 the Chamber of Commerce

considered the question, and favoured the Kennedytown site, but it was not till the destructive typhoon of September 18, 1906, had galvanized the authorities into action that any definite schemes were got out or reliable estimates made. After considering the Kennedytown scheme, which, owing to the great depth of water, would be very costly, and a proposal to build a breakwater at the back of Stonecutters Island, on closing the bay known as Cheung Sha Wan, which was negatived owing to the great suitability of the bay for reclamation purposes, the Government eventually decided on what is known as the Mong-kok-tsui scheme which consists of building a breakwater from the neighbourhood of the oil tanks at Tai-koktsui to the southern end of Yau-ma-ti, to enclose an area of 166 acres at a cost of one and a half million dollars. The Government proposed to raise the necessary money, partly by utilizing the Colony's reserves and partly by increasing the light dues, and this proposal was submitted for the opinion of the Committee of the Chamber of Commerce. In reply, the Committee stated that they thought the proposed expenditure excessive and that sufficient protection against typhoons could be built at much less cost. We are not in a position to criticize so highly technical a question as the design of a breakwater but we do hope that no mistaken ideas of economy will be allowed to step in the way of the provision of a thoroughly adequate refuge, adequate—not for our present needs only—but with a view to the expansion of one of the first ports in the world. Surely our Public Works already show too many instances of an inability to realize the needs of the future to admit of any half measures being taken in this instance. We have the Tytam Dam which was stopped short by 10 feet and then had to be raised that amount within 6 years, and our streets laid out too narrow to be widened later on, where possible, at considerable cost. Of course we are quite aware that the present is not a time to launch out on any but absolutely necessary expenditure; as we stated in our previous article if the scheme is susceptible of modification we trust the Government will make such modification, but our point is that it would not be in the interests of the Colony that a work which will take some years to complete and which will serve the Colony for many more years should be designed on lines commensurate with the present low financial condition of the Colony. We are amply justified in assuming that that condition is only a temporary one. A case in point is that of the Praya Reclamation, one of our most important public works. It will be within the recollection of many residents that in 1893, in the thick of our last great commercial depression, an influentially signed petition was presented to the Government asking for a suspension of the work on the ground that the Colony was not then in a position to carry it on. The Government, fortunately on this occasion, disagreed with the petitioners, and we all know that the Praya Reclamation has paid for itself over and over again. We are confident that the Colony may expect a similar return from the provision of an adequate Typhoon Shelter."

LESSONS FOR THE ENGINEERING PRO-FESSION IN THE QUEBEC BRIDGE COMMISSION'S REPORT

The Engineering News gives a comprehensive review of the findings of the commission selected to investigate the recent Quebec Bridge Disaster and emphasizes the points brought out demonstrating just where the responsibility for the disaster rested, and pointing a lesson to the members of the profession from the sad experience of those upon whom the blame must rest. The News says:

"Seven months ago, when the half-completed Quebec Bridge superstructure crashed to destruction, we ranked it as the greatest of engineering disasters. The report upon this wreck, just made by the Canadian Commission of Engineers appointed to investigate it, is we believe the most notable investigation of an engineering disaster that the present generation, at least, has seen.

"A very great responsibility was laid upon this Commission. The country, as well as the engineering profession the world over, desired to know not only the immediate cause of this terrible catastrophe, but the secondary causes which had contributed to bring it about. It was important to find the particular member whose yielding under stress brought down the whole structure in gigantic collapse; but it was far more important that engineers should know what were the defects of organization, or method, or men, or material that lay back of this failing member.

"The Quebec Bridge disaster is a great object lesson to the engineering profession, and it is not a single lesson, but a score of lessons. Not-withstanding the large space which we have given to this disaster during the past seven months, the further space given to the Commission's report in our present issue is demanded by the important lessons which it contains—lessons not alone for the bridge engineer but

for the whole profession.

"The task laid before the Investigating Commission was one of extreme difficulty, not so much in tracing the sequence of events which led to the final great collapse as in the judicial weighing and collating of all the facts and distributing in equitable measure the burden of responsibility. In fact one lesson which deserves emphasis here is the importance of judicial fairness in work of this sort. It was not more important that the members of the Commission should have the technical qualifications to understand intricate questions of bridge design and quality of materials than it was that they should be able to fairly weigh men and their acts. A commission less expert might easily have been led astray on some of the technical questions involved. There was ample opportunity for this since the public prints, particularly in Canada, have teemed with discussions of the accident and its causes, which have borne a fair appearance of truthfulness and yet have been in the highest degree misleading-and some of these discussions, we regret to say, have come from engineers.

"So, too, a commission less judicial in its makeup might have treated the disaster in a partisan way, and the result would not only have been injustice to some of the parties involved but cloaking of some of the important lessons to be taught. Here again the profession at large has not been guiltless. We have heard engineers use extravagant terms as to the blame which should be laid on this or that or the other party concerned, speaking without knowledge of the attendant circumstances, and assailing motives as well as deeds. Are we putting it too strongly when we say that no engineer with a spark of professional pride has a right to make public statements of this sort based on partial knowledge? The blame should be meted out where it belongs, certainly; and this the Commission has done; but let us not make the common mistake of going farther and concentrating burdens on one party or another for the sake of relieving some one else.

"When the news of the great disaster was first telegraphed over the continent and engineers everywhere began to canvass the possible causes for the wreck, there was, we doubt not, a general consensus of opinion that the cause could not be laid to conscious, deliberate neglect on the part of the designers and builders. As we said in our editorial immediately following

the disaster:

"The importance of the structure must have made every one concerned in its building feel the responsibility of securing, not only perfect design and excellent workmanship, but also

material of absolute reliability."

The Commission's report establishes the truth of this prediction. All those concerned in the prosecution of the enterprise understood that they were engaged upon a structure of vast importance and gave to it their best endeavors. The work done throughout was of unusually high grade, with the sole exception of a few apparently small defects, whose importance no one realized until the disaster came like lightning from a clear sky.

"The men who were chiefly responsible for the bridge, Cooper, Deans, Szlapka, Scheidl and the staff of the Phoenix Bridge Co., Norris and the

whole organization of the Phoenix Iron Co., with the inspectors in shop and field, labored conscientiously and diligently, far beyond mere perfunctory performance, to create a successful work. The details were looked after with marvelous industry and fidelity; and it was well that this was done, for faults in an engineering work are almost invariably faults in details. But in the pressure of the work upon details, defects in the fundamentals of design were overlooked.

"At the very bottom of the design was the assumption of the dead load of the completed bridge; and yet this assumption was not checked by the weights of the members themselves, as taken from the shop drawings until it was too

late to change the dimensions.

"It was an error of administration—unrealized at the time, of course, but an error nevertheless—that subjected the designing engineers to such pressure of work that the chief designer, Szlapka, never found time to check his original dead-load assumption, and never required the detailing department to bring together the detail weights as the work went ahead. The resulting error of 30% in the weight of the structure, the Commission says, was enough to condemn the bridge had it not failed from another weakness.

"It was an error of administration that put the entire engineering control of the design upon one overworked and underpaid Consulting Engineer provided with a single assistant. And it was because this man, sound and experienced both in theory and in practice, loaded himself with laborious detail work that he overlooked the fatal error in the assumed dead weight until the bridge was half built. Because of this, too, his judgment went to sleep when it ought to have condemned the fatally weak design for the great compression members.

"It was a grave fault of administration which permitted the erection of this vast structure—a work of far greater complexity and difficulty than the profession has realized until this Commission's report appeared—without the constant supervision of a high-class bridge engineer constantly on the ground. We said in our

issue of Sept. 19 last:

"'If a huge piece of steel work like the Quebec Bridge can appear in perfect condition and yet collapse under static loads without warning, it is cause for great uneasiness among

engineers.'

"We now know that the great bridge did give ample warning of the distress it was experiencing; and these warnings were seen and their significance was realized by the practical men on the ground. Authority, however, lay not in their hands but with a nominal Chief Engineer, in Quebec, 12 miles away, who was lacking in the technical knowledge and experience necessary to deal with such a problem. Real authority lay at New York. 600 miles away, with an engineer who had never seen the structure for which he was actually carrying the entire engineering responsibility, and at Phoenixville, still farther distant, where the engineers were relying on Cooper with implicit faith, and receiving the letters and telegrams from the subordinates at Quebec telling of the strange behavior of compression members without the smallest conception of its fatal significance.

"Had there been no fundamental errors of design to create an emergency, a high-class resident bridge engineer clothed with authority to act in an emergency was still needed at the bridge site to see that the delicate work of erection was properly carried forward; and had such a man been on the spot, the lives of the 74 men killed in the disaster might

have been saved.

"We need not take space to enumerate all the lessons contained in the Commission's report. They are evident enough to every engineer who carefully studies it. There is one lesson, however, which deserves emphasis; and one which it behooves us as engineers to study in all humility.

"And the lesson is the contrast between the practical man—the man whose only training was the training of the shop and the field—and the engineer with a thorough technical education.

"It was two foremen in the Phoenix shops who, in handling the huge ribs which were to

be assembled to form compression chords and posts, became impressed with the flexibility of these members and their unsuitability to act as long compression struts. These criticisms were communicated by the President of the Phoenix Bridge Co. to Mr. Szlapka and Mr. Cooper and were dismissed by them as unsubstantiated.

"When the inspectors of the bridge found a bottom-chord member bent-not merely kinked but bent alike in every component part and on its entire length—who was it that perceived the seriousness of the situation? Not the scientifically-trained engineering directors of the work. Birks laughed down all fears He set his belief that the chord could not be crippling because, forsooth, it was not yet loaded to anything like what it was designed to carry, against the positive statements of observed facts by Clark, Kinloch, Yenser and McLure. Deans, with even less actual information than Birks, asserted that he knew no change had taken place in the member, and over the telephone reassured the staff at the bridge. Szlapka, the man who had designed the bridge, knew every part and how it should behave, saw nothing in the matter to alarm him.

"But Yenser, the unschooled erection foreman, realized that the question was one of life and death, and for the time being drew off his men. Kinloch, the bridge inspector, a practical man, saw more clearly than any other man the fast coming disaster, and he made a two-days' fight to bring all the others to see the danger. Clark, the yard foreman, another "practical" man, took the same side, and clinched the proof of danger by his declaration that the chord was straight when it left the yard. But all these positive facts and the intuitive perceptions of the men of largest practical experience were over-ridden and silenced by the very men who should have had the best knowledge, the men trained in the scientific analysis of structures and entrusted with responsible charge of the work.

"Two men of scientific training, indeed, did appreciate the gravity of the situation. Cooper realized it, although not at all in the way that he would have done had he been on the ground with the failing chords before his eyes; and his realization came too late to save the lives of the workmen. McLure also, who had the advantage of a college training, saw the danger, but, as the man of least experience among those on the ground, he appears to have been least ready to assert his views strongly. And, according to Kinloch, he did not keep his promise to wire if Cooper considered the case alarming. These two exceptions, therefore, do not modify the force of the general statement

"It need hardly be said that we do not draw

attention to this matter as an argument against college training for engineers. No man need be one whit less practical as an engineer for a four-years course in an engineering school. The real lesson to be drawn is the lesson of humility. Let us never undervalue the experience of the man who actually handles and works the materials. Better yet, it is the duty of the engineer to be even more practical than the workman. The designer can learn things from the actual machine in the shop that he could never find out from the machines as laid out on the drawing-board. Theory is an absolute necessity; but let us lose no opportunity to check the theories with the behavior of the material in the mill and the structure in the field.

"It is of course true that things like this have been said many times before; but the trouble is, we have not taken them to heart. We have supposed that they referred to the men who try to do professional work with nothing but theoretical knowledge. It has not occurred to us that the men in the top ranks of the profession, who have been building great engineering works for nearly a lifetime, needed such admonitions

admonitions.

"And yet that is what the event shows. We all of us, juniors and seniors alike, need to know more,—to test our theories constantly in the light of new knowledge, to welcome such knowledge when it comes, well attested, from any source. Yes, surely, the great lesson of this greatest disaster is the lesson of humility."

BRITISH NORTH BORNEO

The territory of the Chartered Company of British North Borneo extends to about 31 000 square miles and has a population of about 180,000.

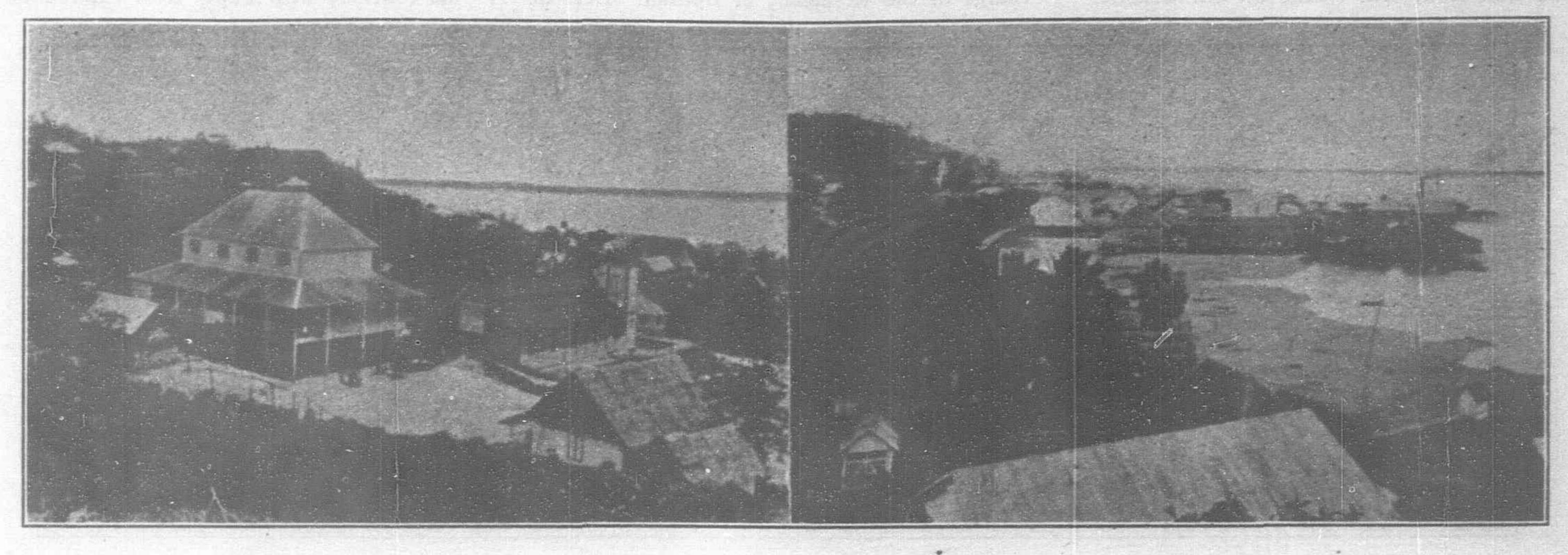
Within the limits of the State are magnificent ranges of lofty hills covered with some of the finest timber in the world, and one of these ranges produces the highest point of Oceania, the beautiful, mysterious this track will increase. Cutch works have been established for some time and are in a flourishing condition.

There is a large salt fish trade between Sandakan and Hongkong which is increasing yearly—it is almost wholly in the hands of Chinese. From most of the outstations a good trade is done in jungle produce—the railway also brings a lot from the interior

on either side and good macadamised roadsliving is cheap in all these places.

The State of North Borneo is surely and steadily increasing in prosperity, and in the near future it will become a bright gem in the Imperial Crown.

\$896,185.89 and the total expenditure was \$497,744.90. It is expected that this year the



(F. Phillippe, Photographer.)

VIEW OF ST. MARY'S CONVENT TOGETHER WITH A VIEW OF SANDAKAN LOOKING EAST

mountain of "Kinabalu" (13,780 ft) round which center romance and legend with origin in the dim and distant past. Between the ranges are beautiful and fertile valleys and plains, well-watered, and only awaiting occupation and cultivation to prove their fertility—almost every product brought into life by a tropical sun can be grown and grown well—but at present pre-eminence is given to one viz: tobacco. This valuable plant thrives and flourishes as it does in Sumatra and Java—indeed there are not wanting those who predict for North Borneo tobacco a success as brilliant as that attained by the millionaire companies of the former island.

The cultivation of rubber is also carried on to a considerable extent, several companies having been formed to work this profto Jesselton and a large quantity of rotan is exported.

The China Borneo Co., Ltd., shipbuilders and engineers, have a patent slipway in Sandakan which can take vessels of 600 to 800 tons at any state of the tide. There are sawmills at Sandakan and Jesselton which turn out excellent work—at the former town a new ice and mineral waterworks with cold storage is in course of erection and will soon be finished; this will be a great boon as previously we have been dependent on Singapore and Hongkong. At Simpopon on the East Coast (St. Lucia Bay) the "Cowie Harbour Coal Fields Company" are making great progress-they employ about 600 men, mostly Chinese, and have a large stock of coal at the mines and at the Depot on Sebatik Island where large

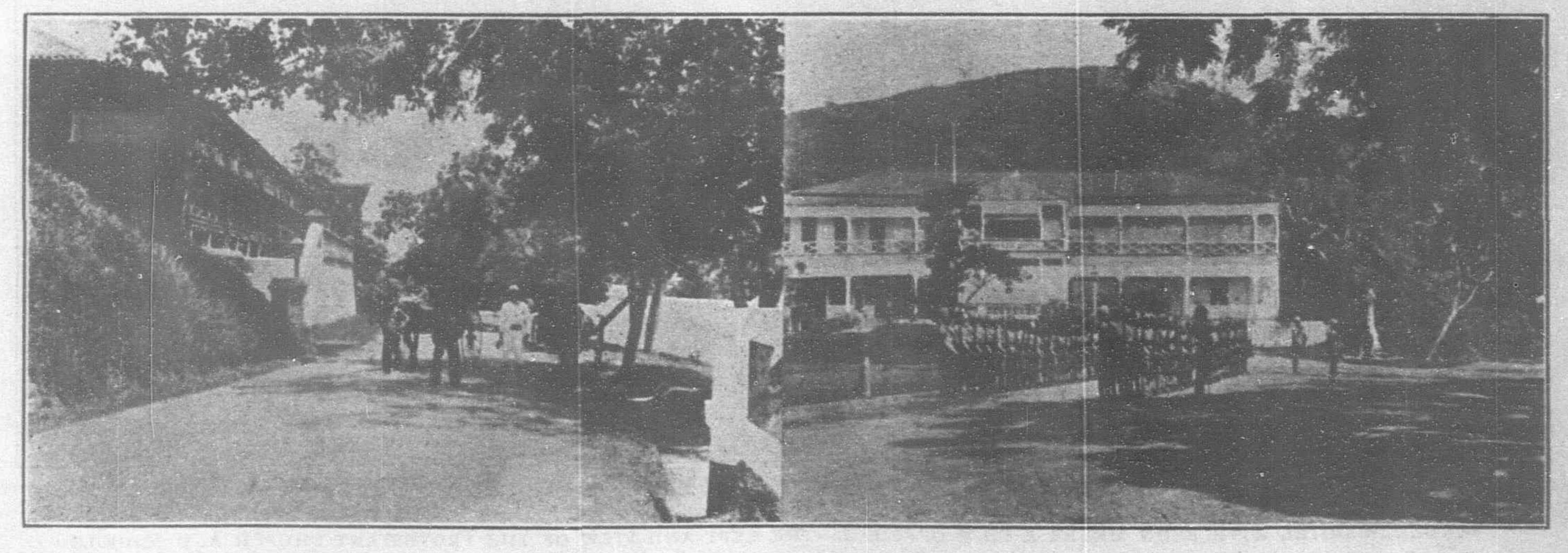
revenue will be greatly increased.

The photographs accompanying this article will serve to show what an interesting place is Sandakan, the capital of the State.

A. W. R.

SKETCH OF HIS EXCELLENCY EDWARD PEREGRINE GUERITZ, GOVERNOR OF BRITISH NORTH BORNEO

At Jesselton, or Api Api as the Malays have it, on the West Coast of British North Borneo, is a high hill, curved like a half moon; overlooking on one side the immense distances of the China Sea, and on the other, the great mountain of Borneo, Kinabalu, or "The Chinese



(F. Phillippe, Photographer.)

VIEW OF THE SANDAKAN CLUB AND SANDAKAN HOTEL WITH THE GOVERNOR'S GUARD OF HONOR DRAWN UP IN FRONT

itable product. There are thousands of acres suitable and doubtless within the next few years much of this land will be taken up. Several firms are engaged in exporting timber to China. A good trade is done and

vessels can load. A large stock is also kept in Sandakan. Many improvements have been effected in the towns, particularly in Sandakan, Kudat, and Jesselton where there are fine wide streets of good houses with shade trees

Widow," with range upon range of encircling jungle-covered hills clinging around her skirts.

On this wild and beautiful spot is built Government House, Jesselton. A large and roomy bungalow, with wide veraudahs, modern fur-

niture and equipments, the present home of Edward Peregrine Gueritz, Governor of British North Borneo.

I found His Excellency in his office, surrounded by minute papers, which on learning my business he very courteously laid aside, and we were soon deep in reminiscenses of his very eventful life. The life of a born wanderer as his name very aptly points, whom interest and inclination have led into the far places of the earth.

Mr. Gueritz is a tall, distinguished looking gentleman, whose fifty odd years, although they have whitened his head, have not prevented him from still taking an enthusiastic

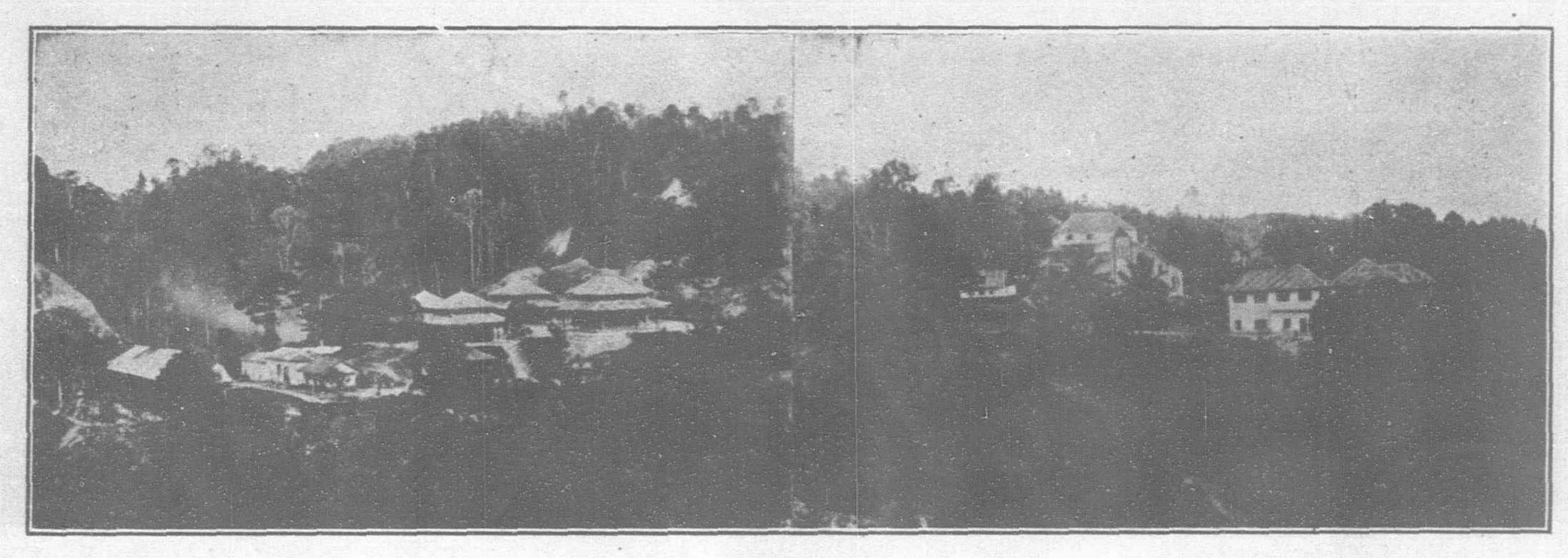
The first event of his life was his introduction to Rajah Brooke through his elder brother who had previously joined the Rajah's service in which he lived and died.

The romance, which has always attended the great Rajah's remarkable career, took possession of the boy's mind and fired his imagination. From that day he was destined for the East. He applied for and was given a cadetship in the Sarawak Service, and in 1874 he left England for Borneo.

At the age of 21, after serving for 18 months in various parts of Sarawak, and enduring many consequent hardships, he was put in charge of the Residency of Bintulu. Here he

Sydney, and thence to Shanghai in a sailing ship, to save expenses.

After a few days in Singapore he was offered an engagement with Capt. John Dill Ross, to report on the trade of North Borneo and the Sulu Archipelago. He had no sooner signed this contract when a letter arrived appointing him Assistant Resident on the West Coast of British North Borneo, a position of far greater importance; but, as Capt. Ross held him to his previous agreement he spent six months travelling and visited the various islands in and around British North Borneo and Sulu, and reporting on the condition of trade there. When his contract with Capt. Ross expired he was



(F. Phillippe, Photographer.)

NEW ROMAN CATHOLIC CHURCH AND MISSION AND VIEW OF THE CIVIL HOSPITAL AT SANDAKAN

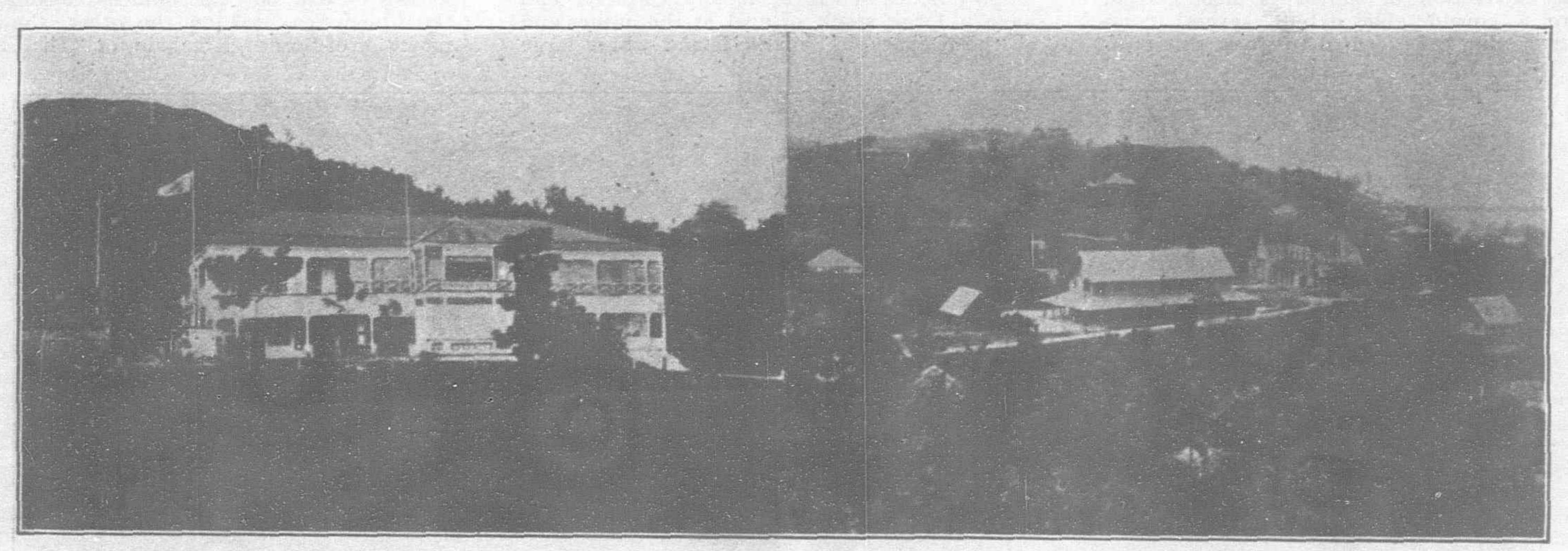
and active interest in tennis and various sports. His manners are affable and courteous, as bespeaks the travelled Englishman; and his fund of characteristic reminiscence and amusing anecdotes evidently spring from a great appreciation of humor.

The strong impression one gets in talking to Mr. Gueritz is that he is in harmony with his surroundings, and has found that niche in life he is best calculated to fill.

Mr. Gueritz was born March 18th, 1855, in the little town of Bigbury, on the South Coast of Devonshire. His father, a clergyman of the church of England, from whom he received most of his education, is still living in the same contracted dysentery, and, after a serious illness, was forced to resign the service and return to England to recuperate.

In England he stayed two months, but finding his health showed little improvement in that climate, and that his funds were fast diminishing he sailed for New Zealand, where he was at once offered a position as correspondent of the Bank of New Zealand. This he accepted with the intention of remaining one year and then returning to the East, but at the end of that time he was advanced to a much better position, and resolving to make the most of his business opportunities, he remained for two more years, obtaining a busi-

appointed Assistant Resident at Kudat, in the British North Borneo Service. This term of service proved to be the most stirring period of Mr. Gueritz's career His district extended as far as Tuaran on the West Coast, and, in the various comings and goings in the exercise of his duties, he had many exciting and dangerous adventures. At one time after visiting Abai, he started to return to Kudat in a gobang, or native boat, and was caught in such a bad storm that it kept him at sea for two nights and days without provisions, unable to land on account of the rough breakers caused by the character of the coast. The boat finally



(F. Phillippe, Photographer.)

SANDAKAN HOTEL WITH BEHN MEYER & CO.'S OFFICE ON THE LEFT AND VIEW OF THE PROTESTANT CHURCH AND SCHOOLS

county at the advanced age of 84. As a boy Mr. Gueritz sang in various church choirs for over 8 years, and the beauty, dignity and mystery of church music and oratorio, sank so deep into his young mind that after years of outdoor life in savage and almost inaccessible countries, it is still one of his greatest sources of enjoyment.

ness experience which, in Mr. Gueritz's own words, has been throughout his entire life of inestimable advantage to him.

The "Call of the East," however, at last grew too strong to be resisted, he felt that all his inclinations and his life work lay there, and in 1880 without prospect of employment, he left New Zealand for Singapore, going via sprang a leak and all regarded the situation as desperate; finally on the morning of the third day he was rescued off the coast of Sapang Manguio, the most Northern point of Borneo, by H. M. S. "Magpie" then surveying in those waters.

Another interesting incident happened about this time. The natives of the district bordering Marudu Bay were giving trouble. One powerful Bajau Chief, Serib Alun, particularly, opposed the chartered rule, less by active opposition than by every other means. He, however, was at last reported to be harboring certain outlaws.

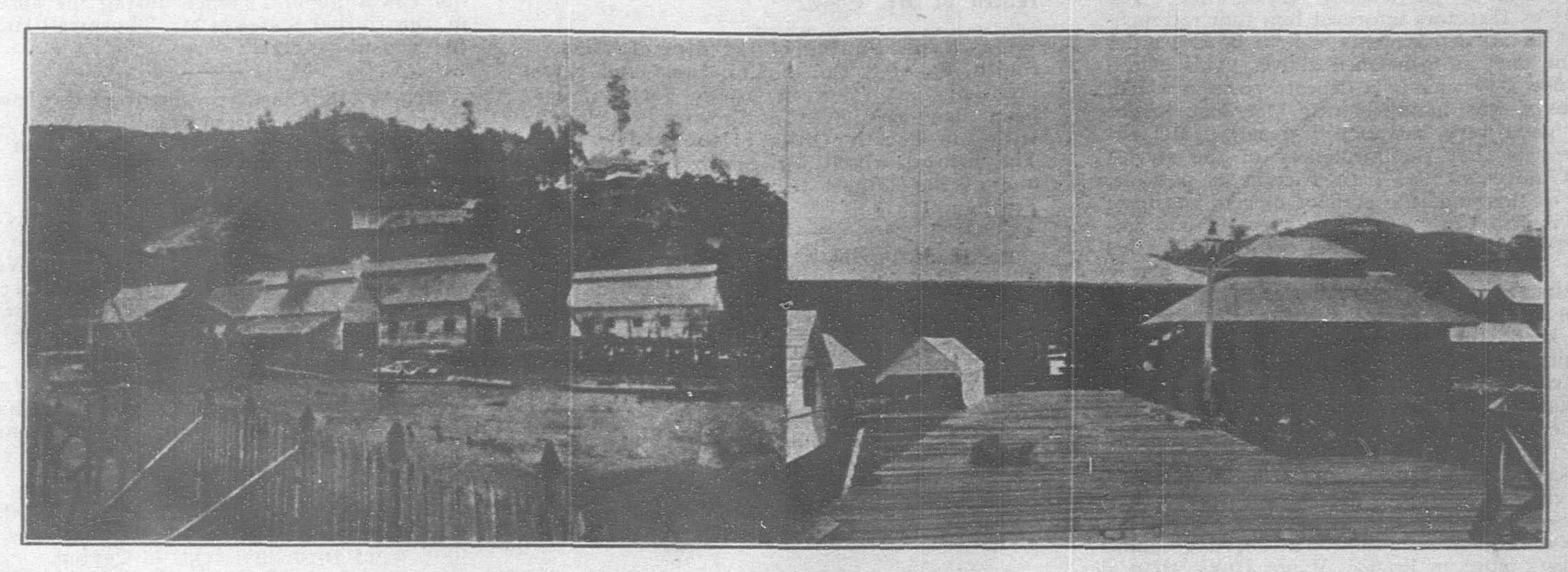
Mr. Gueritz being at the time on a launch anchored off the Tandek river heard of this and sent a messenger to the Serib ordering him to come on board. In the course of a few hours he came, and was ushered into the cabin where Mr. Gueritz and two unarmed Europeans were sitting. The Serib wore his very best Kris (native knife) which he was requested to

took him as far as Singapore and provided him with a passage. In Singapore the Serib told Mr. Gueritz that he had no animosity whatever against him or the Government. He had lost the game and he knew it, ending a somewhat penitential dissertation, by requesting a loan of \$2.

The next day he made his will, Mr. Gueritz witnessing it, and after that he sailed for Mecca and died on the voyage.

During the Kudat term of service Mr. Gueritz also directed and came successfully through an epidemic of cholera, and one of small-pox, such a time being unusually trying as the

All our provisions were tinned and came most irregularly on account of the difficulties of transportation. Ours was the only house in the place, the upper floor was our private dwelling and the lower, the gaol and Government office. At first I could not speak a word of the language, and when my husband's duties took him into the jungle which happened two weeks out of four, I was left entirely alone with my little girl." Such a life was calculated to test the courage and endurance of the bravest woman, but Mrs. Gueritz rose to the occasion having followed her husband through all his varying fortunes with a rare devotion.



(F. Phillippe, Photographer.)

THE CHINA-BORNEO CO.'S PATENT SLIPWAY, SHIPBUILDING PLANT AND ENGINEERING SHOPS—SLIPWAY TAKES VESSELS TO 800 TONS
ANY STATE OF TIDE—VIEW OF THE CUSTOM HOUSE AND WHARF

remove. He declined to do so. When again requested, he asked in an insolent tone, what would happen if he refused.

Mr. Gueritz told him that such a possibility had not occurred to him. He hesitated for a moment holding in the only weapon in the room the key to the situation. Subsequent events showed that he knew at the time his career was ended, and the question evidently came into his mind whether an amok with a white man as the victim would not be a picturesque and effective termination of it. He, however, decided in the negative, for after a few moments' reflection he opened his belt and placed the kris at his right hand on the table saying "I will put it here," but, immediately he released his hold on the weapon, Mr.

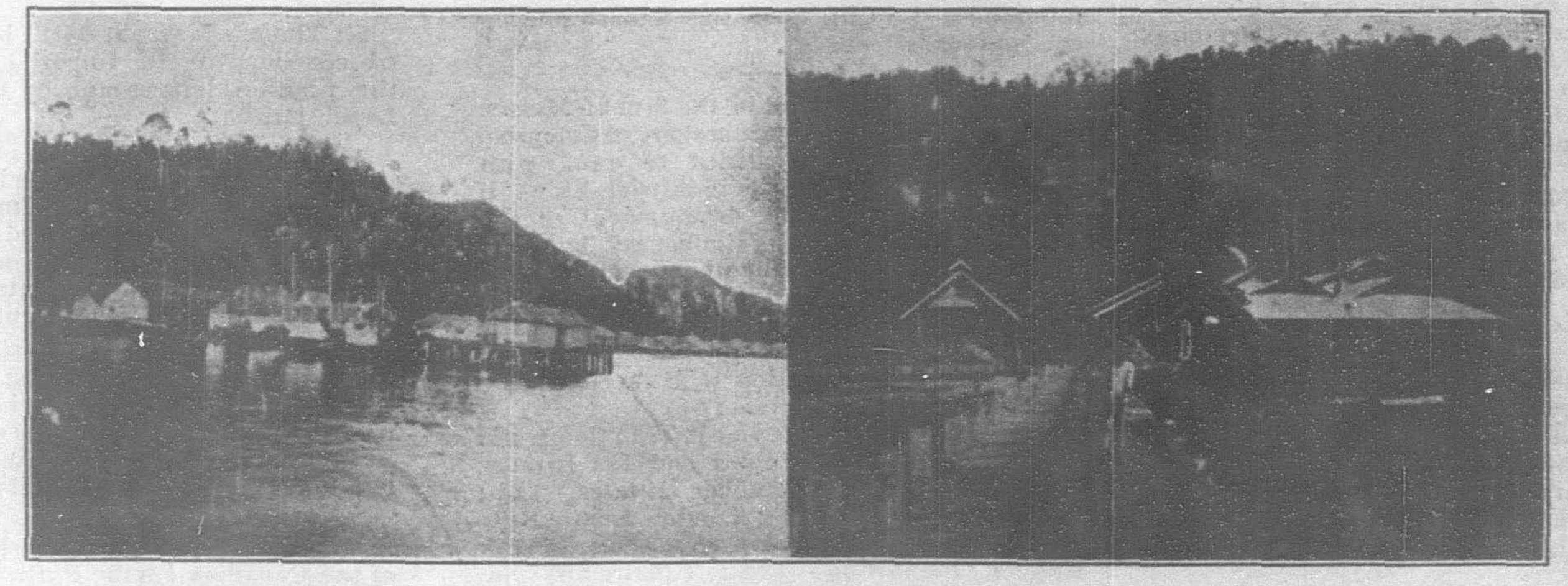
natives, and especially the Chinese, have a great fear and dread of European remedies.

Finally, in 1884, not finding the prospects for advancement very promising, he resigned his appointment and returned to England. Coming out to Singapore again in 1885 he obtained through the courtesy of the Colonial Secretary at Singapore an appointment as Collector of Land Revenue at Sungei Ujong in the Straits Settlements, and after 6 months of this work he was sent to hoist the British Flag at Jelebu in the Federated Malay States. Here he was Collector and Magistrate, and during his term of service he went to England and married, in 1886, Annie M. Cole, daughter of Maurice Cole of Paston Hall, Northamptonshire, and Ivy House, Straurer, Wigtonshire,

At the end of four years Mr. Gueritz contracted small-pox and on his convalescence he and his family were obliged to return to England.

In 1890 Mr. Gueritz resigned the Jelebu appointment and was appointed Acting Resident of Labuan, which was then under the administration of the British North Borneo Co. In Labuan he also filled the position of Judge, and finally that of Governor from 1903-1905, holding the King's commission as such, whereas as Governor of British North Borneo he holds the commission of the Court of Directors, subject to the approval of His Majesty's Government.

From that date he has filled the following positions in the service, i. e. District Magistrate,



(F. Phillippe, Photographer.)

SALT FISH MARKET AT BULI SIM SIM. -BAKAN CO.'S CUTCH FACTORY AT SANDAKAN

Gueritz, who was seated at his right, quietly leaned across, and placing his hand on the kris calmly said "I think it will be safer here," laying it down beside himself.

The details of his case were then dealt with, and eventually he was banished. He expressed a wish to go to Mecca, and Mr. Gueritz

N. B. After the wedding Mr. and Mrs. Gueritz at once returned to Jelebu. Mrs. Gueritz, who had never before been in the East, vividly describes her life there. In her own words, "Jelebu was a little clearing in the heart of an immense jungle—50 miles from the nearest port, 25 of which was through rough jungle.

Sandakan; Government Officer on Chinese Advisory Board, Postmaster General, Sessions Judge, Member of Council, Editor, Judge of Chief Court, Secretary to the Governor, Government Secretary, Government Commissioner, Judicial Commissioner, Sept. 13, 1903; Acting Governor 1904, Governor January 1905.

It is Mr. Gueritz's great ambition to open up the country, to see, in his own words, a net work of roads and railways, throughout all B. N. Borneo and the bustle of a lively and prosperous community coming in and going out of her various ports, but all efforts have been hitherto handicapped by lack of money, without which very little can be accomplished in a country so remote, and so thinly populated. That it possesses wonderful possibilities and great wealth he firmly believes.

At present he is most interested in the planting of rubber on the West Coast which promises to be a great success. As a Governor his first duty was a particularly trying one. The Court of Directors informed him that retrenchment in all departments was to be the order of the day, as mentioned above. This placed the new Governor in a delicate position which, however, was handled with tact and justice and gave very satisfactory results. His endeavor is that the machinery of the service shall move with as little friction as possible, and to this end, the staff of officers has been and is still being constantly revised and improved. The young cadets are especially his care. He makes them feel that they can rely on him, when their inexperience in the service leads them into mistakes or trouble, but he also keeps them up to the standard of work he himself sets, well knowing that loafing in a tropical country, where temptations are proverbial, can be, and has been, the beginning of the end, of many a young man's career.

Mr. Gueritz's hobby is landscape gardening, an occupation for which the beautiful country and climate of Borneo gives a wide scope.

Government House, Sandakan, with its trim tennis lawns, and well arranged grounds, suggests more an English Manor House than a "Bungalow in Borneo," and the new one at Jesselton, having a more beautiful situation, will no doubt rival it in a few years.

After his gardening and various duties of his office Mr. Gueritz likes a game of billiards on his new and cherished billiard table, a go at tennis, or a long walk in the cool of the afternoon to note the various improvements that are being made. His tastes are simple and domestic with an occasional look in at the Club for more billiards.

He is a delightful host, but gives most of the various social duties of his position into the capable hands of his charming wife, who fills her position as "first lady of the land" with dignity and graceful tact.

ELIZABETH B. JOHNSTON.

PERSONAL

Mr. R. Black, manager of the New Amoy Dock Company, Limited, has been granted a well-earned leave of absence after ten years' continual service in the interests of the company. The following excerpt from Chairman Nilson's speech with its reception by the shareholders indicates the high regard in which Mr. Biack is held:

"The general managers have granted leave of absence to Mr. R. Black who has served faithfully as manager of the Dock for about ten years, and I am sure we all wish him every happiness and success during his well-earned holiday. (Applause.)"

Governor-General Paul Beau of Indo-China was decorated by the Japanese Emperor with the Grand Cordon of the Rising Sun while at Tokio enroute to Paris via the United States. His Aile-de-camp, Major Faucan, who accompanied him, was also honored by the insignia of the Fourth Order of the Rising Sun.

Mr. C. McArthur succeeds the Hon. John Anderson to the vacancy on the Tanjong Pagar Dock Board, made by the latter's resignation.

Mr. J. W. Ragsdale, American consul-general at Tientsin, has been ordered to St. Petersburg and Mr. E. T. Williams, secretary to the legation at Peking, succeeds him.

Mr. Ross Thompson, manager for Messrs. Butterfield & Swire at Newchwang, has been assigned to duty as manager of the company's branch at Tientsin succeeding Mr. Elkins who goes to Hongkong.

Mr. P. H. Henshaw, deputy traffic manager of the Federated Malay States Railways, who is acting traffic manager during the absence of Traffic Manager Cook now on leave, will very probably be appointed traffic manager of the Johore State Railway upon the completion of that road. The work of construction will probably be completed by the return of Mr. Cook.

Mr. N. F. Smith, of the firm of Messrs. Smith, Baker & Co. of Yokohama and president of the American Asiatic Society, has been decorated by the Emperor of Japan with the Fourth Order of the Rising Sun. The firm of which Mr. Smith is member is one of the largest tea exporting houses in Japan.

President Yagin, of the Formosan Bank at Taipeh, left last month for an extended tour of Europe and America. It is understood that this trip is fraught with results bearing upon the development of the natural resources of the island by the interesting of foreign capital in those adventures.

Mr. J. B. Scrivenor, whose interesting reports on the mining industry of the Federated Malay States have been so widely read, has won a well merited promotion in the position of senior warden of mines for the F. M. S.

Mr. J. Trump has been appointed to the important position of director of public works for the F M. S., according to the late advices from Kuala Lumpur. This department is one recognized as more closely allied with the successful development of the States than any other bureau.

Mr. J. C. G. Spooner of the Malay States Railways has been appointed to act as divisional engineer of the Southern Division of the system.

Mr. Lester Maynard, the American Consul at Sandakan, has been assigned to duty at Vladivostok.

Mr. J. R. Brazier will succeed Mr. G. Brown who has been in charge of the Peking Syndicate's interests in China. Mr. Brown goes to London in the interests of the company. It was Mr. Brown who conducted the negotiations on behalf of the Syndicate for the repurchase by China of the Shansi mining concessions.

Mr. Keith Arbuthnot of the firm of Messrs. Sanderson & Co., produce brokers of Colombo, would seem to be entitled to rank with many of the uncrowned industrial kings if his connection with the development of the tea and rubber growing industries be taken into account. A Colombo contemporary announces that, in addition to being director of the New Sumatra Rubber Company recently floated with a capital of £60.000, he has a similar connection with the following representative corporations:

Dimbula Valley (Ceylon) Tea Company, Ltd; General Ceylon Rubber and Tea Estates, Ltd.; Inambari Para-Rubber Estates, Ltd.; Linggi Plantations, Ltd; London Asiatic Rubber and Produce Company, Ltd.; Perak Rubber Plantations. Ltd.; (Chairman) Sumatra Para Rubber Plantations, Ltd.; Tandjong Rubber Company, Ltd.; United Serdang (Sumatra) Rubber Plantations, Ltd.; Wheal Commerce Tin Mines, Ltd.

It is announced that Taotai Wong Kokshan, who has held the position of Chinese Commissioner of the Shanghai-Nanking Railway, has been appointed commercial manager of the Ping-han-yeh Coal and Iron Company of Hankow.

The vacancy in the directorate of the Hongkong and Shanghai Banking Corporation occasioned by the absence from the colony of Mr. G. H. Medhurst has been filled by the appointment of Mr. E. G. Barrett, acting manager of Messrs. Dodwell & Co.

Mr. W. P. Waddell has succeeded Mr. W. A. Grieg who resigned his position as member of the Tanjong Pagar Dock Board, recently.

Mr. George E. Chamberlain, vice and deputy consul-general at Singapore, is in charge of the consul-general's office during the absence in the United States of Mr. Thornwell Hayes, the consul-general.

Mr. W. P. Clark, president of the Insular Lumber Co., sailed from Manila early in April for the United States. His home is in Belmont, New York.

Sheng Kungpao has been directed by the Peking government to take charge of the reorganization of the Hanyang Iron Works so as to be prepared to fill the prospective orders for railway supplies and arms for the government.

Mr. H. D. C. Jones, formerly of the Manila branch of the Hongkong and Shanghai Banking Corporation, has been appointed manager of the branch at Yokohama.

Mr. Field, assistant traffic manager of the Burma Railways, has accepted the position of district superintendent in Ceylon.

The departure of Mr. Birch, British Resident at Perak, last month for Europe was marked by the expressions of regret at his departure from the state where he has labored so successfully. Everybody, official and unofficial, turned out to see Mr. and Mrs. Birch off at the Taiping Railway station, to give them an enthusiastic send off and wish them buen viaje, according to the Perak Pioneer as evidence of the high regard in which, Mr. Birch and his charming wife are held.

The Hon. John Fowler, consul general at Chefoo, sailed last month for Boston via Europe on account of his health. He was given a rousing despedida on the eve of his departure.

The Hon. H. Keswick has assumed the duties of chairman of the Hongkong Chamber of Commerce, succeeding Mr. A. G. Wood.

Sir Thomas Jackson, Bart., has been appointed chairman of the Imperial Bank of Persia, the position left vacant by the death of Sir Lepel Griffin.

Mr. A. G. Cox, chief divisional engineer outside the Wall for the Imperial Railways of North China, will succeed Chief Engineer Tucky as chief engineer at Tientsin, the latter having been appointed chief of the Northern section of the Tientsin-Pukow line.

Mr. J. D. Clark, editor in chief and managing director of the Shanghai Mercury, accompanied by Mr. H. T. Butterworth of Messrs. Butterfield & Swire, left Shanghai for Europe last month via the Trans-Siberian route.

Mr. W. T. Payne, formerly representative of the Canadian Pacific Railway at Yokohama, has been promoted to the position of general manager for the Far East. He will make his headquarters at Yokohama where he is exceedingly popular. Mr. Payne has had the distinction of having been twice decorated by the Emperor.

Mr. M. S. H. McArthur, resident at Labuan, has been appointed federal secretary at Kuala Lumpur, and Mr. J. F. Owens succeeds him.

LIGHTHOUSE SERVICE OF THE PHILIPPINE ISLANDS

At the time of American occupation of the Philippine Islands there was only one light in operation: that on Cape Melville, Balabac Island, south of the Island of Palawan, marking the entrance between the China Sea and the Sulu Sea. As is the custom in time of war, the Insular Spanish authorities had ordered all lighthouses to be extinguished when it was found that an attack on Manila was contemplated by the American Navy. It appears that this order was carried out with all lights

and thirty-one buoys in position. The steamer "GENERAL, ALAVA" was borrowed from the Navy and the two lighthouse officers made a complete inspection trip of the islands. It was found that, partly due to neglect and partly to wanton abuse by the insurgents, all of the light stations were in urgent need of repairs, and this item was taken up before all others. However, the lack of funds and transportation facilities, and the lack of materials in the Manila market, were such that not until



CAPE ENGAÑO LIGHT STATION—NORTHERN PART OF LUZON ISLAND; LAT. 18° 34' 52" N., LONG. 122° 07' E.; FLASHING WHITE; SHOWS DOUBLE FLASH EVERY 30"—FIRST ORDER, 315 FEET ABOVE SEA LEVEL; HEIGHT TOWER, 47 FEET; VISIBLE, 25 NAUTICAL MILES

except the one mentioned above, where the order was never received. The keeper in charge of this light kept his light burning up to June 30, 1899, without assistance, and was paid for his services from May 1, 1898 to that date, by the Philippine Government. Due to the unsettled condition of affairs immediately after American occupation, and the outbreak of the Insurrection following soon thereafter, little or nothing was done in lighthouse matters until 1901. A few lights were re-lighted, some being maintained by the Quartermaster Department, and some by the office of the Captain of the Port, but, naturally, only a passive interest was taken by those offices.

ORGANIZATION OF THE LIGHTHOUSE SERVICE

When the Civil Government was organized and the United States Philippine Commission installed, that body realizing the urgent necessity for an efficient lighthouse system in a country like the Philippines, where practically the only means of transportation both locally and to foreign countries is by water, the subject of the Lighthouse Service was among the first to be taken under discussion and the first step toward organizing a Lighthouse Establishment was taken in October, 1901, when Act No. 266 was passed, creating the Bureau of Coast Guard and Transportation—of which the Lighthouse Service forms a part. Officers of the Army and Navy were detailed for duty with the Bureau, a Lieutenant-Commander as Lighthouse Inspector, and a Captain of the Engineer Corps as Lighthouse Engineer. At that time there were twenty-seven lights in operation

August, 1902, was the repair work started. The purchase of two lighthouse tenders ("PICK-ET" in August, and "CORREGIDOR" in October, 1902), and the appropriation of funds for lighthouse purposes soon placed the Lighthouse Service on a working basis, and the work began in earnest.

REPAIRS

Repair parties were sent to stations with instructions to make a complete overhaul and general repairs. These repairs consisted chiefly of repairing the roof, renewing and repairing the floors, doors and windows of the dwelling and of repairing the windows, ventilators and roof of the tower and lantern. In some cases entire new outhouses had to be constructed, and, at one station (Lusuran, Guimarás Island), a heavy concrete retaining wall had to be built around the brow of the hill upon which the lighthouse tower and dwelling are situated to prevent the threatened sliding of the structure into the sea. As soon as the financial status of the Lighthouse Service would allow, civil engineers and inspectors were employed and a regular and efficient system of inspecting the work in progress at various stations, and of determining the repairs needed at all other stations, was commenced.

UNCOMPLETED STATIONS

At the time of the outbreak in 1896 the construction of four large stations was in progress, viz. Bugui, Jintotolo, Capul, and San Bernardino. The latter was nearly completed—

in fact the light was already in operation—and, being the more important of the four (1) was the first one at which work was started. It was found, however, that during the prevalence of the N. E. monsoon a landing at San Bernardino was impossible and the working party had to be taken off in September, 1903, with the work still uncompleted. This station was not entirely completed until July, 1904. Bugui and Jintotolo were completed and third-order flashing lights installed. Capul, which was designed by the Spaniards to be a sixth-order fixed light was made a third-order flashing light and commenced burning in November, 1903.

NEW LIGHTS

An inventory of the Lighthouse warehouse in Manila was made and several cases of expensive lighthouse apparatus, clock-work, two steel towers, various spare parts of apparatus, and a large quantity of cleaning material, chimneys, wick, etc., were found. The largest of the steel towers (2) was erected on Apo Reef, off the west coast of Mindoro, and a thirdorder flashing light was installed. Iron towers were found at the sites of proposed light stations on Tanguingui Islet (northwest of the northern point of Cebu), and Capitancillo Islet (off the northern part of the east coast of Cebu). These were erected and fourth-order flashing lights installed upon each. At Bagacay Point, east coast of Cebu, (3) a hexagonal-shaped tower 69 feet high was erected and a third-order flashing light installed. This tower is built of masonry for the first 18 feet, the remainder being of concrete blocks. The first tower to be built entirely of reinforced concrete is that on Maniguin Island, off the west coast of Panay. This tower is 97 feet high, cylindrical in shape, and supports a third-order flashing light. An iron tower was erected on Bagatao Island, at the entrance to Sorsugon Bay, and a sixth-order flashing light installed thereon. A cylindrical reinforced concretes tower 101 feet high was constructed on Cape Bolinao, west coast of Luzon, and a thirdorder flashing light installed. A similar tower is at present in course of construction on Batag Island, northeast of Samar. Sixth-order light stations have been built at the entrance to Subic Bay, and on San Fernando Point, Union Province. Besides these large lights, many minor lights, such as port lights, harbor lights, etc., have been established.

DIFFICULTIES OF CONSTRUCTION

Major Spencer Cosby, Corps of Engineers of the United States Army, who was Lighthouse Engineer in the Philippine Islands for about two years, read a very interesting paper on Lighthouse construction in the Philippines, before the American Society of Civil Engineers on February 6th, 1907, of which the following is an extract (4):

"When the American engineers first took up the matter of lighthouse construction, they were confronted with conditions differing greatly from those met in similar work in the United States. In some respects the problem appeared to be of easier solution. There are practically no fogs along the coasts of the Philip-

Civil Engineers," Vol. LVIII, page 278 (1907).

⁽¹⁾ San Bernardino is situated in San Bernardino Straits, south of Luzon Island, through which channel all vessels pass coming from or going to the United States via Guam, and nearly all vessels running between Japanese, Chinese, Philippine and Australian ports use this same passage.

⁽²⁾ This tower is 113 feet high. A part of the tower had been thrown into the Pasig River, presumably by the Spaniards, and was found by one of the dredges in 1903.

⁽³⁾ There was a small fixed light at this point, but the tower was so low and the light so weak that it was frequently confused with the lights of fishing craft

(4) See "Transactions of the American Society of

pines, and both the transparency of the atmosphere and its refractive power are greater, according to the observations of the Spanish engineers, than along the Atlantic coast in temperate latitudes. These conditions make the lights themselves more effective, and render unnecessary the fog signals which are the most unsatisfactory parts of our modern lighthouse system. Then, too, a working season extending over the whole year, the absence of frost, and the cheapness of labor were factors which promised to be of material advantage in carrying on construction work.

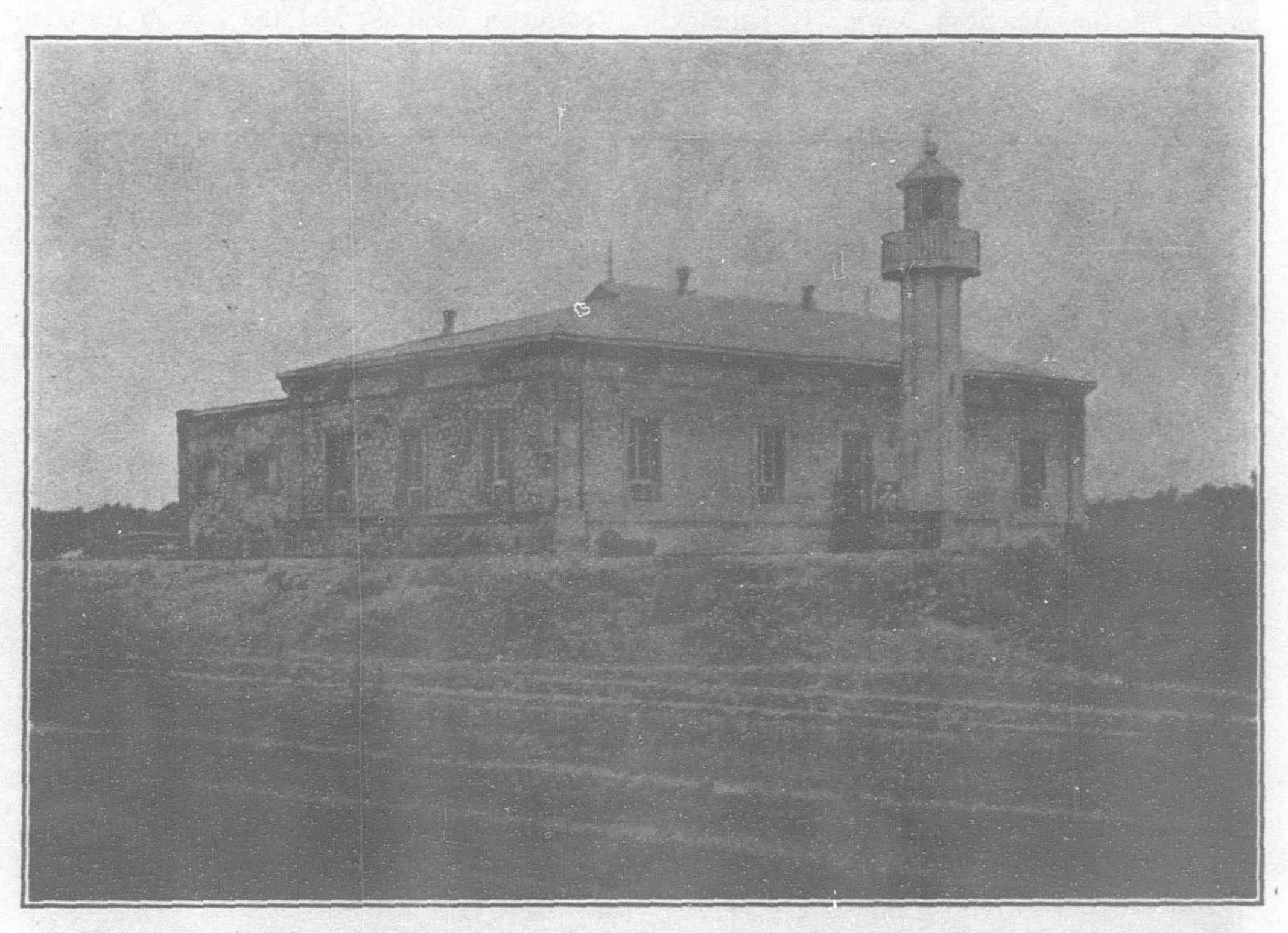
To offset these, however, were others of the opposite kind-typhoons of frequent occurrence and of cyclonic violence along the paths of their centers; earthquakes of a mild character taking place constantly but in certain districts reaching at times the most destructive intensity; the presence everywhere of the termite or white ant (the great destroyer of woodwork); the tropical humidity adding to the difficulty of protecting iron and steel properly; and the increased cost and long delays in obtaining many of the tools and materials of construction. Labor was found to be cheap in about the same degree that it was efficient. A native carpenter, mason or blacksmith at a dollar a day, will do no more than one-half to onequarter as much work as an American skilled workman, and will require more constant and careful supervision. Unskilled labor at from 20 to 50 cents per day perform just about that much worth of work according to American standards. One peculiar difficulty was met in securing workmen to go to some of the isolated stations. The Filipino is strongly attached to his family, and many of the most desirable men refused to leave home for even a few months unless they could take their entire families with them. The difficulty of transporting and housing at the site such a mob of men, women and children dwindled, however, when it was found that each family carried in a small sack its entire belongings, including the cooked rice to be eaten on the voyage, and they expected nothing more in the way of accommodations than sufficient room to lie down anywhere above or below deck, and that a few sticks of bamboo and bundles of nipa (palm leaves used for thatching walls and roofs) provided them with all the materials needed for building a home. It should be mentioned that the labor conditions improved materially as time went on, as the lazy and incompetent were weeded out, and as those retained became used to steady work of the kind required. With fair treatment and proper training, it is believed that the Filipino can be developed into a more efficient and more reliable laborer than the negro of the South."

Since the above was written, there has been such a remarkable increase in the efficiency of the Filipino artisan and laborer that it is only just to correct a wrong impression which otherwise might be given. The Filipino machinists in the lighthouse repair shop have turned out some very beautiful work; work that requires the utmost precision and good judgment, such as the clock-work for operating the sixth-order lights mentioned later on in this article, and the finish of their work will

Several lights have been changed from fixed to flashing characteristics, and the range of visibility increased, where the height above sea-level would allow, by the substitution of prismatic lenses of greater scope, and later by the substitution of the incandescent system of lighting for that of the ordinary wick burner.

INCANDESCENT SYSTEM OF LIGHTING

The principle of the incandescent system of lighting is the vaporization of petroleum by



LINAO LIGHT STATION, NORTH LUZON; LAT. 18° 22' 42" N., LONG. 121° 35' 21" E.; FLASH WHITE EVERY SECOND; SIXTH ORDER; 36 FT. ABOVE SEA LEVEL; HEIGHT TOWER, 30 FT. VISIBLE II NAUT. MILES

stand a close comparison with similar work done by the best French mechanics on apparatus purchased in Paris.

IMPROVEMENT OF LIGHTS

Existing lights have been improved from time to time and many defects remedied. The "false flash" of various flashing light has been eliminated by the conversion of polygonal lanterns into those of cylindrical shape by the substitution of curved panes; and also by the re-adjustment and replacing of reflectors.

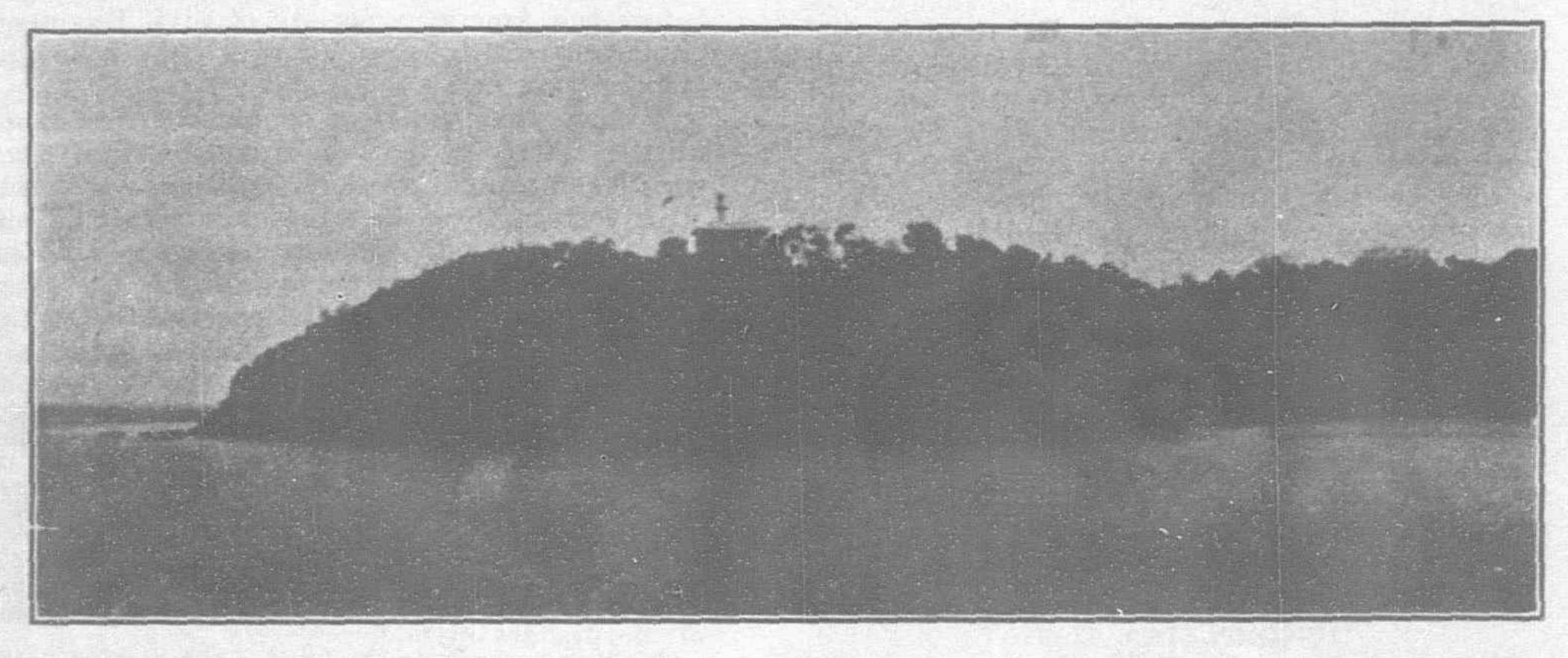
its injection into a vaporizer which is kept at a constant and very high temperature by the heat generated by a small auxiliary "Bunsen" tube at the base of the burner. The vapor thus produced passes through a diffuser and is there automatically mixed with the necessary amount of air for combustion, and issues from a wire gauze on the top of the burner, burning with a blue and very hot flame which raises a "Welsbach mantle" to incandescence. The pressure on the petroleum is obtained by means of compressed air, the combination of the reservoirs for the air and the oil, the burner connecting tubes, valves, etc., constituting the lamp, properly speaking. These burners are, in the large lights, superseding all other types of lighthouse burners using wicks, as they give economy in oil consumption, a great increase in candle-power and a greater simplicity in their operation and management.

WICK BURNERS

The principle of the wick burner is the same as that of the ordinary wick lamp, except on a much larger scale, some of the first-order lights using a burner of six wicks, the largest of which (No. 6) is about fifteen inches in circumference. The oil is fed to the wicks from a reservoir through a brass tube.

BUOYAGE

The system of buoyage in the Philippine Islands is practically the same as that in the United States. Buoys are divided into three classes, viz., first, second and third, according to their size, the first class being the largest. There are various shapes and styles of buoys: can, nun, cone, channel, spar, etc. The first four named are made of steel plate, and the



BAGATAO LIGHT STATION, BAGATAO ISLAND, ENTRANCE TO SORSOGON BAY; LAT. 12° 50' 03"

N.; LONG. 123° 47' 36" E.; FLASH WHITE; FLASH EVERY SECOND; SIXTH ORDER; ABOVE

SEA LEVEL, 135 FT.; HEIGHT OF TOWER, 29 FT.; VIS. 17 NAUT. MILES

The Spanish Government maintained few buoys in the Philippine Islands. The approaches to Iloilo and Cebu were buoyed but not efficiently. A few buoys were placed promiscuously by private shipping firms, in various harbors, but with no defined system. As soon as practicable after the Lighthouse Establishment was organized contracts were let for the fabrication of buoys and their appurtenances, and when these were delivered, steps were taken to mark the channels leading into every important harbor and port in the islands. Much has been accomplished in this respect, and much still remains to be done. The chan-

established by the American Government since its occupation of the islands.

PURCHASES OF LENSES AND APPARATUS

One of the principal items of expense of the Lighthouse Service is the cost of the lenses and clock-work comprising the illuminating apparatus. This, coupled with the long delay necessary for their purchase (1), was soon recognized as an important adverse factor of lighthouse construction in the Philippines. Little could be done to remedy the delay. When circular proposals inviting tenders for the furnishing of apparatus are sent out, the time



JOLO LIGHT STATION ON PIER AT THE TOWN OF JOLO, LAT. 6° 03' 20" N. LONG. 121° 00' 20" E.; FIXED RED LENS LANTERN; HEIGHT ABOVE SEA LEVEL, 37 FT., HEIGHT OF TOWER, 35 FT.; VISIBLE 7 NAUT. MILES

nels leading into the harbors of Iloilo, Cebu, Tacloban, Catbalogan, Legaspi, and many other ports of more or less commercial importance have been marked with buoys, and the limits of many dangerous reefs in waterways have been marked in the same manner. With the constant increase of shipping in the Philippine waters occasioned by the growing importance of the many ports, the demand for buoys is increasing at a corresponding rate, and large numbers of these aids to navigation are being placed every year.

UNLIGHTED BEACONS

Unlighted beacons are established in harbors where leading marks are necessary, also upon shallow rocks, shoals, and like dangers to navigation, where it is impracticable to place buoys. They usually consist of wooden posts, of some native hard wood, set in concrete and surmounted by targets of the proper shape and color, viz., white diamond shape with red centers to be passed on the starboard hand, entering, and white square shape with black centers to be passed on the port hand entering. Where marks are necessary at exposed points concrete pillars are erected, as they are better able to withstand the heavy seas and strong winds. Tripods of old iron rails, found in the port works warehouse, are used where the character of the bottom permits. As far as can be ascertained, the Spanish Government maintained no unlighted beacons in these Islands. The only aids of this class that were in position when the lighthouse service was organized had been erected by the Pilots' Association at the different ports, and by private shipping firms. Forty-one unlighted beacons have been

of opening such tenders must be at least four months later. The usual time of delivery is from eight to ten months after the acceptance of the bid. In the preparation of circular proposals infinite care is taken to cover all details thoroughly, to guard against any misinterpretation by the bidders, thereby eliminating the delay that would otherwise be occasioned by letters of explanation. The bidders are always enjoined to take the same care in preparing their tenders.

MACHINE SHOP

With the item of expense, however, a solution of the problem seemed to be in the establishment by the Government in Manila of a machine shop fitted expressly for the manufacture and repair of the clock-work and all other metal of lighthouse apparatus, so that it would only be necessary to purchase the glass lenses and prisms. It would cost more money to establish and maintain a plant for the manufacture of lenses and prisms than ever could be realized in its operation. The establishment of a machine shop also promised to be somewhat expensive. In the first place the building for the plant must be a strong one so as to reduce the possibility of vibration to the minimum and the machinery necessary for this class of work, in which many of the measurements are read by the vernier scale, must be of the most delicate adjustment and superior manufacturethe cost corresponding to the quality. Considering the weak financial condition of the Philippine Government in the early days of its organization, and that the establishment of such a plant was more or less of an experiment the only feasible plan of installing the machine shop was adopted, i. e., starting in on a small scale and gradually increasing it until the desired capacity is reached. A suitable building for this purpose was constructed of reinforced concrete on Engineer Island and a few of the most necessary machines were installed therein (1904). The motive power was supplied by electricity. An expert machinist skilled in the design and manufacture of instruments of delicate adjustment was brought from the United States and placed in charge of the shop.

The success of this experiment soon became apparent in the results obtained. Due to the urgent demand for repairs to apparatus of light stations then in operation little clse was done in the shop for the first year or two, but this work was done at such a surprisingly low figure that the success of the lighthouse machine shop as an experiment was assured. Later, as more machinery was added to the shop, the construction of rotating apparatus for minor classes of lights was attempted—then the more important work of constructing apparatus for a larger light. A set of lenses for a sixth-order flashing light had been purchased from Europe. These were mounted in frames of our own



BAGACAY LIGHT STATION, EAST COAST CEBU AND NORTH ENTRANCE CEBU HARBOR; LAT. 10° 22′ 59″ N., LONG. 124° 01′ 07″ E.; FLASH. WHITE; SHOWS GROUP OF 4 EVERY 20 SECS. SEPARATED INTERVALS 2.5 SECS. FOLLOWED BY INTERVALS OF 12.5 SECS.; THIRD ORDER; HEIGHT LIGHT ABOVE SEA LEV. 143 FT.; HEIGHT TOWER, 69 FT.; VIS. 18 NAUT. MILES.

casting, the clock-work and lantern were made in the shop, and thus a sixth-order illuminating apparatus was supplied at less than onehalf of the cost were it purchased complete.

⁽¹⁾ Lighthouse apparatus is manufactured in but two countries in the world—France and England. There are three plants in the former and one in the latter.

The following statements are submitted as illustrations of the great economy resulting from establishing the shop.

COST OF PRODUCTION OF SEVEN OCCULTING PORT LIGHTS MADE IN SHOPS

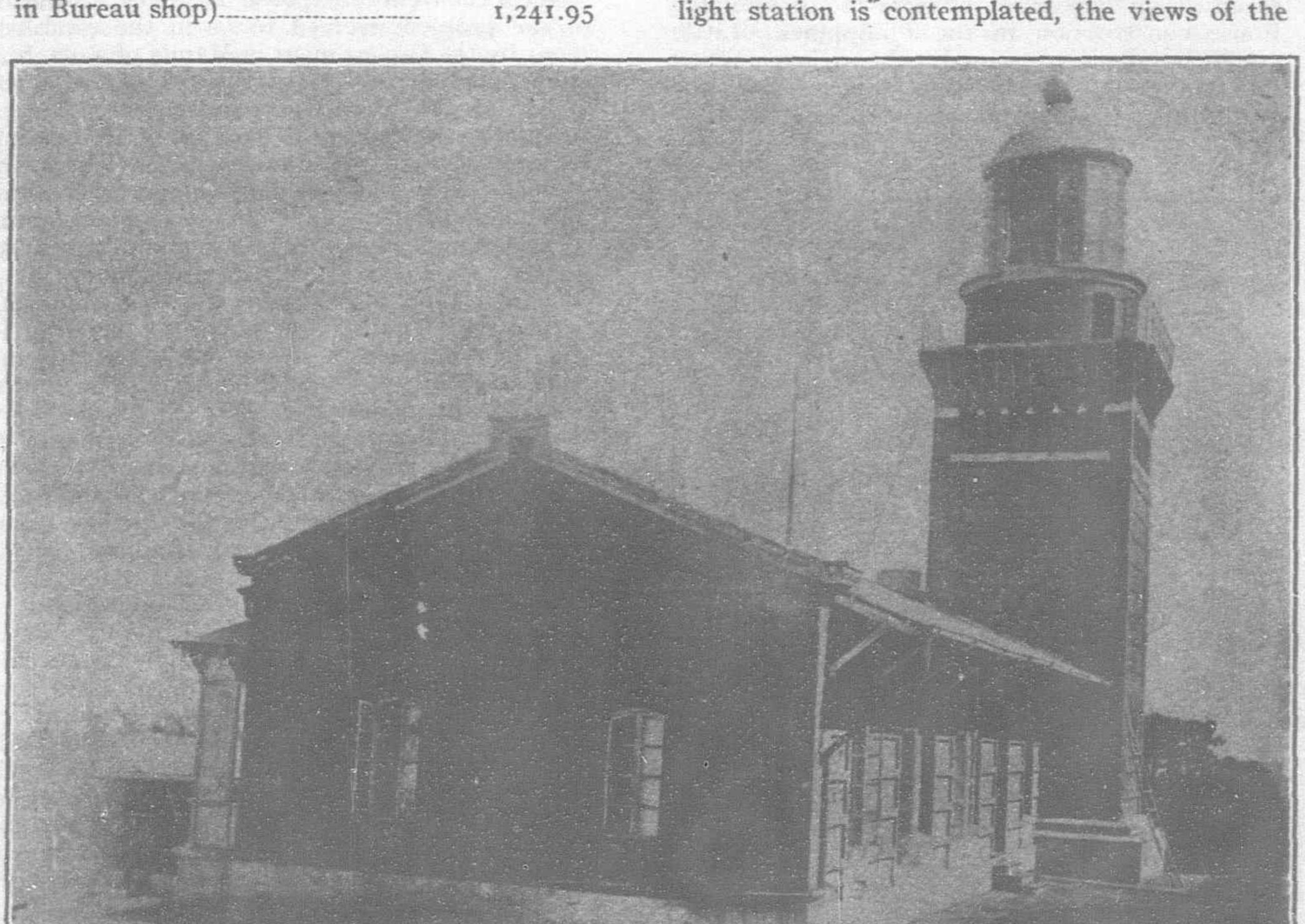
Range, 15 miles.

Lenses (purchased unmounted).... \$\mathbb{P}\$ 9,240.00 Casting for mounting same (made in Bureau shop).....

light, than any we can buy. Altogether, the lighthouse machine shop is probably one of the best paying investments of the Insular Government.

ADMINISTRATION

The system of administration of the Lighthouse Service is effective, though simple and inexpensive. When the construction of a new light station is contemplated, the views of the



CAPONES LIGHT STATION, WEST COAST LUZON; LAT. 14° 55' 05" N., LONG. 120° 00' 15" E.; FLASH. LIGHT, SHOWS FLASH EVERY 30 SECONDS; 229 FT. ABOVE SEA LEVEL; HEIGHT OF TOWER 65 FT.; VISIBLE 18 NAUT. MILES; FIRST ORDER

Springs (purchased) Miscellaneous materials	77.00 232.12
Labor	947.87
Superintendence	333-33
Power (electric current)	90.00
Wear and tear on machinery	151.53
Cost of seven lights	P12,313.80
" " one light " similar light purchased	1,759.11
complete	3,960.00
Saving per light	2,200.89
Percentage of gain	125.7%

OF PRODUCTION OF ONE SIXTH-ORDER FLASHING LIGHT MADE IN SHOPS

Range, 15 to 18 miles.	
Lenses (purchased unmounted) Casting for mounting same (made	P 1,500.40
in Bureau shop)	195.12
Miscellaneous materials	127.33
Labor	171.87
Superintendence	50.00
Power (electric current)	19.00
Wear and tear on machinery	34.92
Total cost	P 2,098.64
comple te	5,049.15
Saving	2,950.51
Percentage of gain	140.1%

Plans are at present in course of preparation for a complete fourth-order flashing light, to be constructed on the same basis as the above, and it is estimated that the percentage of gain will be even greater. Besides these important apparatus, many less important but, nevertheless, costly articles are being made at a good saving, such as oil tanks, burners, tools, instruments, etc., etc. A special kind of lamp for port lights has been designed and fabricated, which serves the purpose better in the cost of production, in durability, and in

various shipping firms, agents, and masters are solicited; the site is examined by the Lighthouse Inspector, Chief of the Lighthouse Maintenance Division, and, if advisable, surveyed by the Lighthouse Construction Division of which the Lighthouse Engineer is in charge. This data is then placed before the Lighthouse Board, consisting of the Director of

Navigation as Chairman, the Assistant Director of Navigation, the Chief of the Division of Port Works, the Lighthouse Engineer, the Light house Inspector, and the Nautical Expert of the Bureau of Coast Surveys. If the decision of that body is favorable to the project, the appropriation of the necessary funds for the construction of the station is requested of the Philippines Legislature. After the station has been erected by the Lighthouse Construction Division it is turned over to the Lighthouse Maintenance Division for operation.

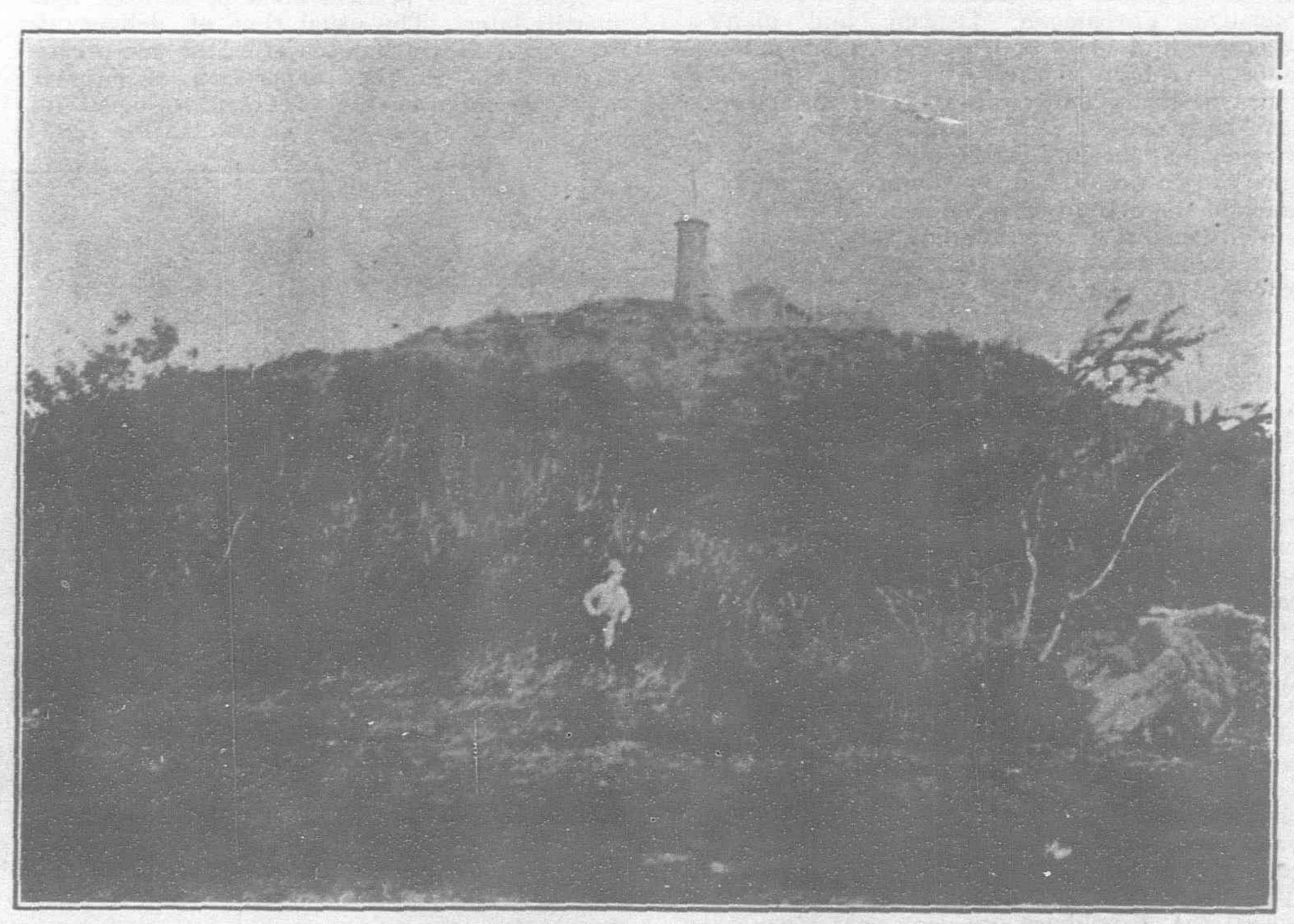
INSPECTION

All stations in operation are inspected by the Lighthouse Inspector and the Chief of Lightkeepers on an average of once in two months. These inspections are made at irregular intervals and may occur at any hour of the day or night so as to surprise the keepers, thus guarding against their becoming negligent in their duties. Inspections are also made at the necessary intervals by an engineer of the Lighthouse Construction Division with a view to keeping the stations in a good state of repair. The progress of work at the construction of a new station is, of course, kept under constant observation by an experienced civil engineer.

KEEPERS AND APPRENTICES

The light-keepers are appointed and trained in the Lighthouse Maintenance Division. They are usually originally appointed as secondclass apprentices at fifteen pesos per month and are made first-class apprentices at twenty pesos per month when their efficiency warrants their promotion, usually after about four months' service. The period of apprenticeship is never less than one year, during which time the apprentices spend part of their time in the main office, in the machine shop, and at light stations. To qualify for an apprentice a man must be between the ages of 20 and 25 years, free from physical defects, of good morals, and able to read and write the Spanish language, and have an ordinary education, especially in the metric system. Preference is given those who have a knowledge of the English language and who have had some experience as mechanics. In contemplating the promotion of a keeper, the following points are considered: (The importance of each point is designated by its sequence in the list).

First: Physical condition and ability; Second: Length of Service; Third: Previous record;



CAPE BOJEADOR LIGHT STATION, NORTH LUZON; LAT. 18° 30' 53" N., LONG. 120° 35' 35" R.; FLASH. WHITE, ONCE A MINUTE; DURATION FLASH 15 SEC.: FIRST ORDER; HEIGHT ABOVE SEA LEV. 386 FT.; HEIGHT OF TOWER, 65 FT.; VISIBLE 26 NAUT. MILES

Fourth: Opinions of his superior keepers (taken from the quarterly efficiency reports); Fifth: Knowledge of the English language; Sixth: Date of last promotion. (Except in special cases because are not promoted more

in special cases, keepers are not promoted more than one grade at a time, and must serve at least one year in one grade before being promoted to a higher one).

The Filipinos, when properly trained and kept under strict discipline, make excellent light-keepers. Their punishments usually consist of fines, and reductions of rank and salary, and there is always maintained a steady attempt to weed out the undesirables. The highest salary paid a light-keeper is \$\mathbb{P}\$960.00 per annum (Class A). His Civil Service status begins when he is promoted to a salary of more than \$\mathbb{P}\$720.00. Rations are provided the personnel of isolated light-stations only.

ADVERTISEMENTS

A complete list of the lights, buoys, beacons and daymarks, giving all information useful to mariners of each aid, is published annually, on July 1st. Copies of these lists are furnished everyone interested in shipping commerce, and a special advertisement is placed on the cover of each list to the effect that a copy will be furnished free of charge to anyone making application therefor to the Lighthouse Inspector. Besides these lists, a regular "Notice to Mariners" is sent to all interested persons whenever any new aids or changes in existing aids are contemplated, and also after such changes have been made, giving the necessary information regarding each aid. These notices are also published in the daily newspapers in Manila.

The following is a statement showing by fiscal years what has been accomplished by the Lighthouse Service from the time of its organization in October, 1901 to February 29, 1908:

Net increase,	New buoys and unlighted be Discontinued				Lights in operation at time Total number of light	Net increase,	New lights established Discontinued			
Net increase,	New buoys and unlighted beacons established					Net increase, 11	New lights established		1902	
17	29	1	1908		Service.	1 2			2395	
90	30		1904			21 5	21 5		1908 19	
0	222		1905			25	26		1904 1	
10	19			Fi		14	15		1905	Fiscal
			1906 1	Fiscal		7	10		1906	10000
900	24		1907	years		9	11 2		1907	years:
	22 1	(8 mos.)	1908			9	0 9	(8 mos.)	1908	
	180		Tota		120	96	101		Tota	

List of lights in operation February 29, 1908, classified.

1 2 6 6 5 | 2 | 3 | 3 | 5 |

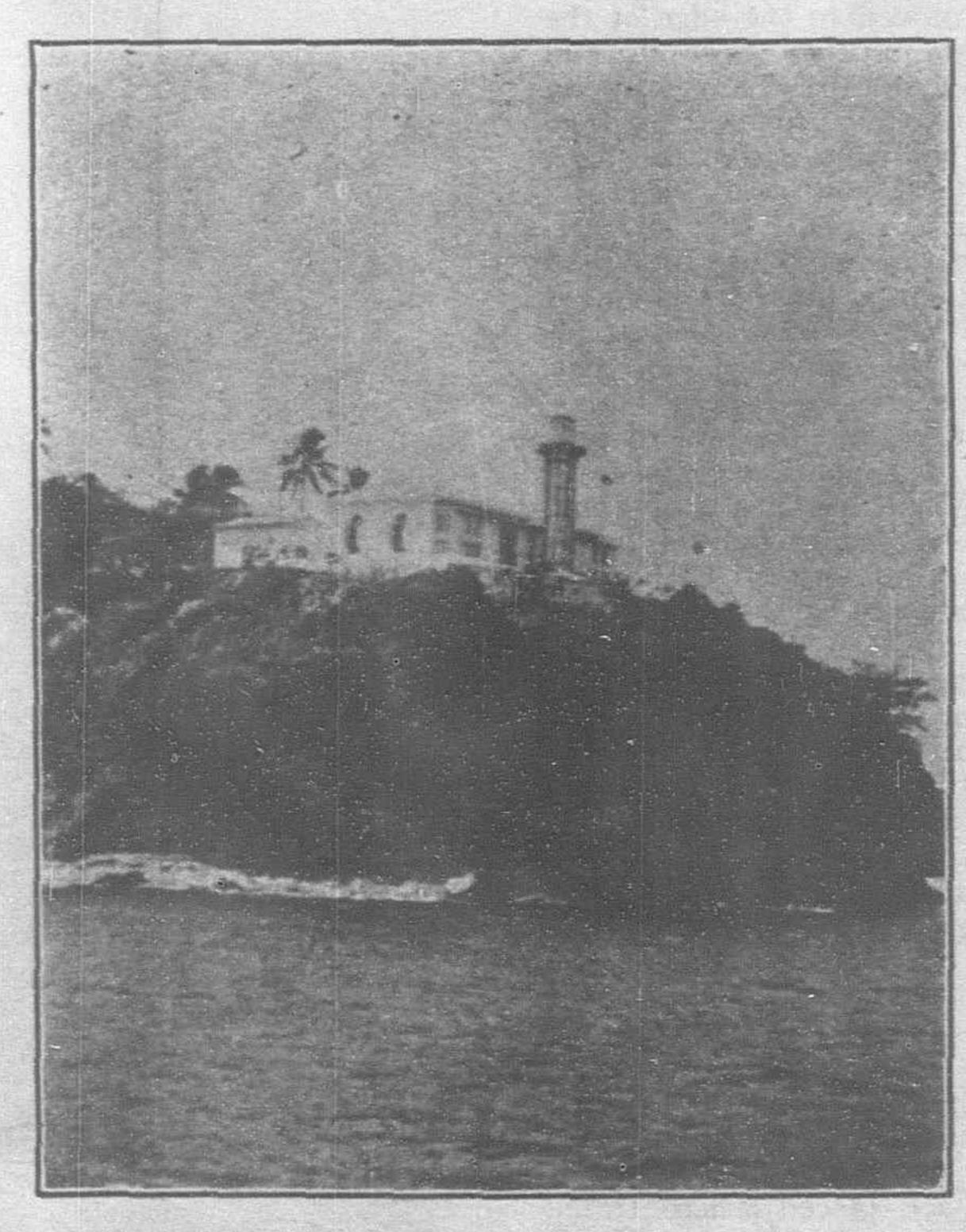
First-or	der,	flashing	5
Second	66	6.5	I
Third	66		8
Fourth	11	4.6	7
Sixth	11	"	8
Sixth		fixed	2
Occultin	ıg li	ghts	12
Sixth-or	der	port, fixed	28
Electric	arc	lights	2
Lens lar	iter	ns, fixed	50
7	ota	1	123

List of buoys and unlighted beacons in position February 29th, 1908, classified.

"	46	nun	4.6	
Second	"	can	44	***************************************
11	11	nun	6.5	
**	"	cone	11	
"	"	spar	"	
Third	66	can	66	
44	11	nun	44	
"	u	cone	64	
u	66	spar	46	
Unlight	eđ i		IS	



CAPE MELVILLE LIGHT STATION, BALABAC ISLAND; LAT. 7° 49' 25" N., LONG. 117° 00' 08"; FLASH. WHITE; SHOWS FLASH EVERY 20 SECS.; DURATION FLASH 5 SECS; FIRST ORDER; HEIGHT LIGHT ABOVE SEA LEVEL 296 FT. HEIGHT TOWER 90 FT.; VISIBLE 24 NAUT. MILES



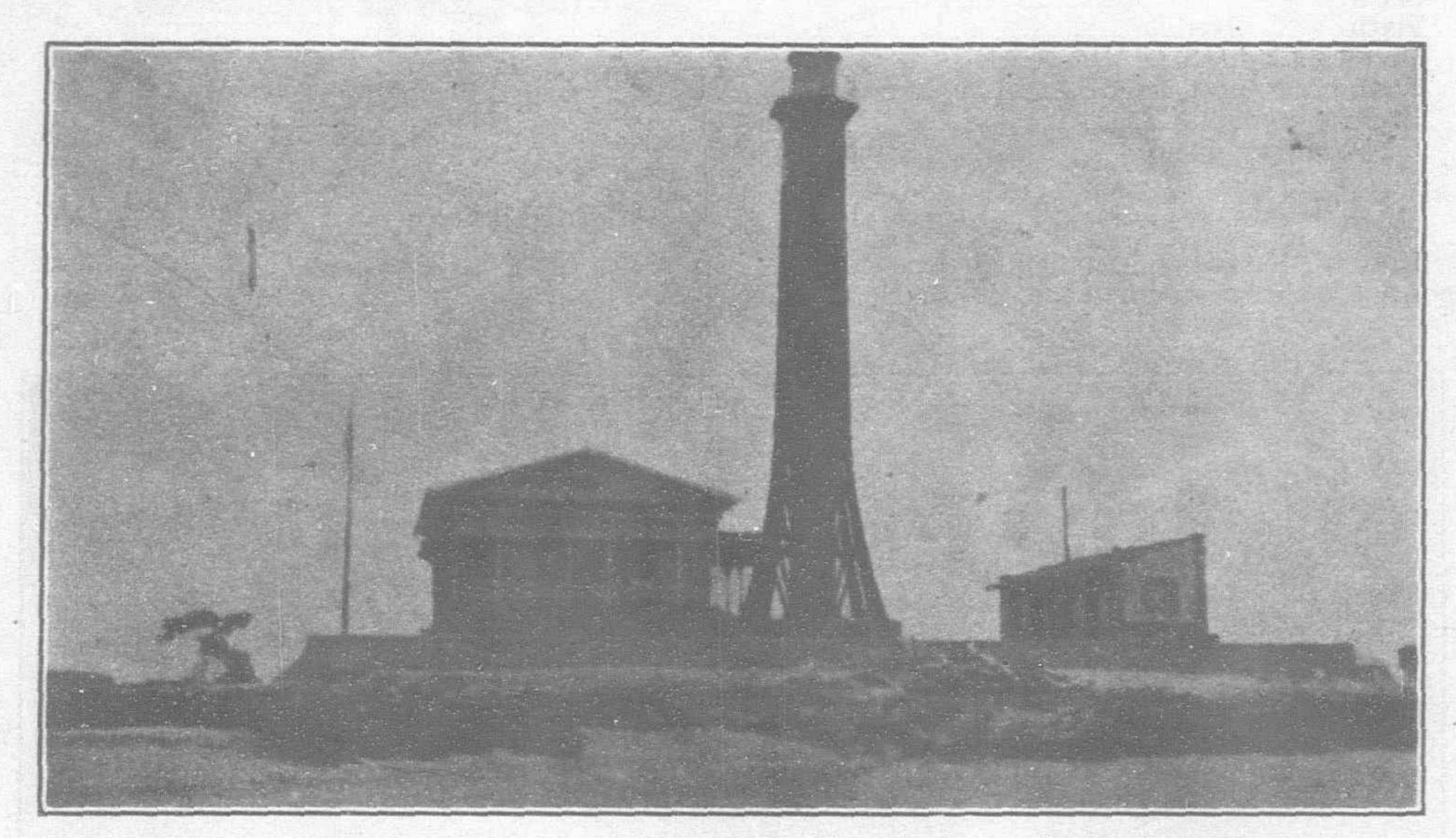
LUSARAN LIGHT STATION, WESTERN EXTREMITY, GUI-MARAS ISLAND; LAT. 10° 29' 02" N., LONG. 122° 28' 07" E.; FLASH. WHITE AND RED; GROUP 3 WHITE EVERY 15 SECS. FOLLOWED BY ONE RED; ABOVE SEA LEVEL, III FT.; HRIGHT TOWER, 38 FT.; VIS. 16 NAUT. MILES.

PLANS FOR THE FUTURE

The construction of a third-order flashing light on Sibago Island, south of Mindanao, of a fourth-order flashing light on Suluan

FORMOSAN LIGHTHOUSE

The Formosa correspondent of The Japan Chronicle states that a lighthouse is being erected on an island called Hokasho, a little



CAPITANCILLO LIGHT STATION, ON ISLAND OFF NORTH PART EAST COAST, CEBU; LAT. 10° 59′ 23″ N., LONG. 124° 06′ 01″ E.; FLASH WHITE AND RED, SHOWS EVERY 10 SECS. GROUP 3 WHITE FOLLOWED BY ONE RED, INTERVALS BETWEEN WHITE 1 2/3 SECS.; BETWEEN WHITE AND RED, 3.5 SECS.; FOURTH ORDER; HEIGHT LIGHT ABOVE SEA LEVEL, 98 FT. HEIGHT TOWER, 83 FT; VIS. 16 NAUT. MILES.

to the north of Keelung harbor. Formerly sailing ships could enter the harbor only in daytime, but when this lighthouse is completed, it is believed they will be able to enter at any time. The estimated cost is -Y-223,700. In the 39th year of Meiji (1906-7) -Y-32,000 were spent; in the 40th year -Y-130,000; and during this present year -Y-61,700. It is expected that by March of next year the work will be completed. Kerosene oil is to be burned in the lamps, which are to be of 700,000 candle-power. The light will be visible from a distance of 30 nautical miles. The lighthouse is, however, smaller than that on the south cape of Formosa.

HONGKONG DOCKS

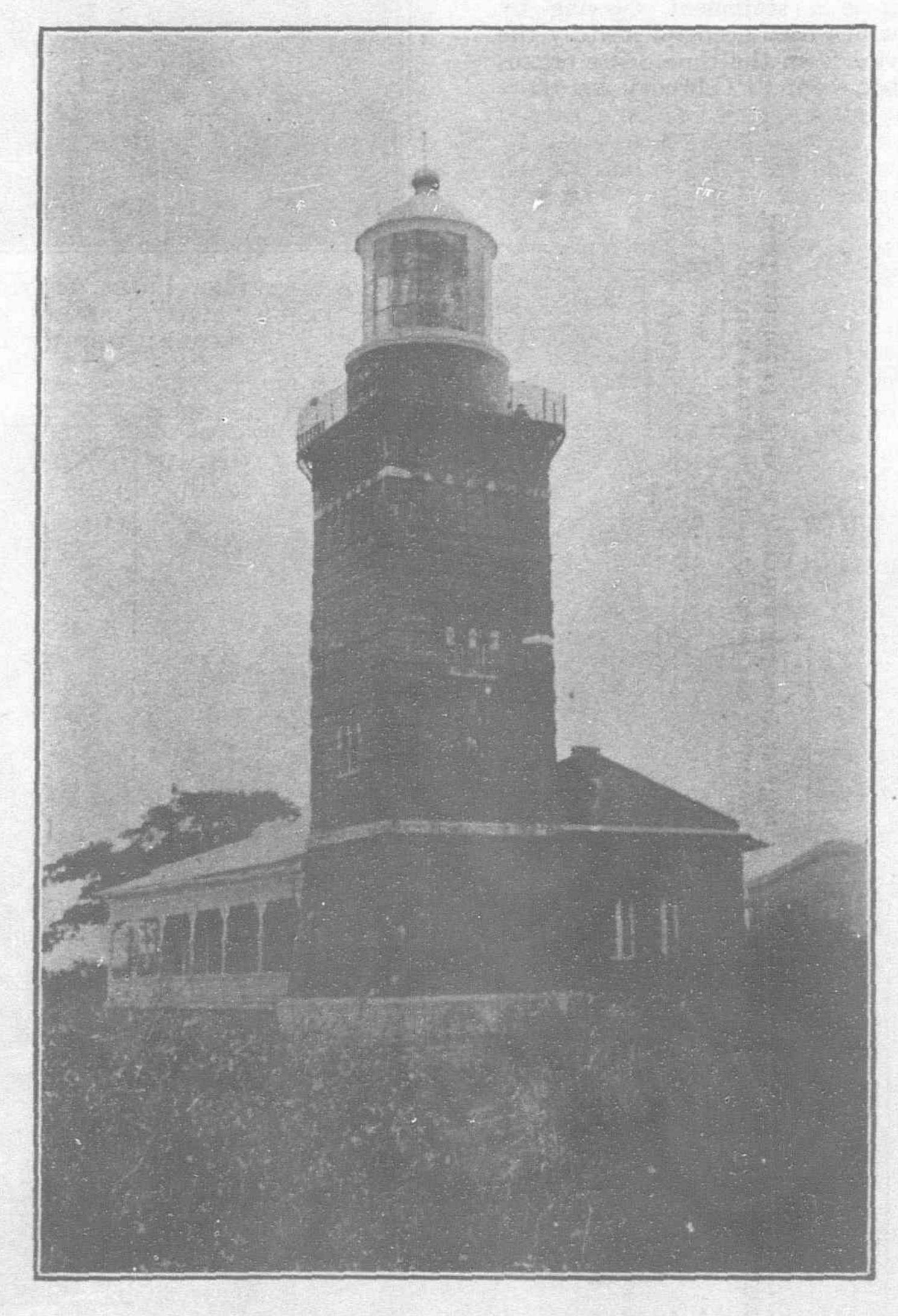
The new steel steam twin screw lighter constructed for the Norddeutscher Lloyd by the Hongkong and Whampoa Dock Co. was launched from the company's slipway April 4th and christened Chantaboon. This vessel is the sixth of her class built for the same company by the Hongkong and Whampoa Dock Co. She will be utilized for the Siamese River trade. The dimensions are 158 feet in length over all and 152 feet between perpendiculars; moulded breadth, 29 feet; moulded depth, 11 feet; and extreme draught, 9.3 feet. She is equipped with two sets of vertical triple expansion surface condensing engines, with a high pressure cylinder 8½ inches in diameter, intermediate pressure 13½ inches, and light pressures 23 inches in diameter, with a stroke of 15 inches. She has one cylindrical moulded steel boiler, return tubular, 11 feet in diameter and 10 feet long. Fox's patent furnaces, with a working pressure of 170 lbs. to the square inch.

Island, southeast of Samar, are contemplated; also the establishment of minor lights on La Monja (near northern entrance to Manila Bay), Cobrador Island (north of Romblon), Isabel Island (east of Mindoro), Colorado Point (at entrance to Port Barrera, Masbate), Divinubu Island (near entrance to Borongon harbor, east coast of Samar), Punta Pata (north coast of Luzon), and at such other places as may be found necessary. The light on Pulo Cabalo (entrance to Manila Bay) will be moved to the highest point on the island, and the present fixed light changed to an occulting one. The light on Lauis Ledge (southern entrance to Cebu harbor) will be moved to the edge of the reef about 1200 yards southwest of it, and the present fixed light will be changed to an occulting one. When the proposed change in Lauis Ledge light has been made, the light on Lipata Bank will be discontinued, as it will not then be necessary.

It is proposed to erect some twenty unlighted beacons and place a large number of buoys in various points of the islands where aids are necessary, during the coming fiscal year. Data is being procured regarding gas buoys, their cost of construction, and the cost of purchase and operation of a plant necessary for their maintenance. When this data is obtained the advisability of establishing lighted buoys in several of the more important harbors of the islands will be considered by the Lighthouse Board.

Although the Island of Luzon, along the passage running from the Pacific Ocean to Manila-via the San Bernadino Straits-has been well lighted, so that when the Batag light is put in operation it will be possible for a vessel 25 miles out at sea to enter and pass through the straights and anchor in Manila Bay without ever being out of sight of a light, there still remains—in spite of this and in spite of the numerous lights that have been placed since American occupation—a large area to be covered, and the islands will not be considered well lighted until there are nearly double the number of lights that we have at present. The most important lights are being considered first, and these are placed where traffic is greatest. During the coming year it is expected that ten or fifteen lights will be built.

The greater part of the data contained in the above article has been collected by Mr. C. E. Piatt, chief clerk in the Lighthouse Service.



CABRA LIGHT STATION, OFF WEST COAST LUZON, LAT. 13° 53' 28" N., LONG. 120° 01' 07". FLASH. WHITE SHOWS GROUP TWO FLASHES EVERY MINUTE, DURATION EACH FLASH, 8 SEC.; INTERVALS BETWEEN FLASHES, 7 SECS; INTERVALS BETWEEN GROUPS 37 SECS.; FIRST ORDER; HEIGHT LIGHT ABOVE SEA LEV., 216 FT.; HEIGHT TOWER, 67 FT; VIS. 21 NAUT. MILES.

NEW OPEN PORT OF NAGOYA

In November, the opening of the Port of Nagoya was celebrated by the inhabitants of Atsuta Prefecture, city of Nagoya. The port has a population of 300,000 and is one of the most active industrial centers in the mainland besides being an important junction of three lines of railway. It faces Atsuta Bay on the South and is situated in 35°7'-12' N. Lat. and 136° 53'-57' E. Long., about half way between Yokohama and Kobe, the two largest ports in Japan. It is the largest city on the high way of Tokaido, formerly being the castle town of Lord Tokugawa, one of the three chief branch families of the Tokugawa dynasty, and, since the Restoration of 1868, it has made a rapid progress.

estimates reached nearly -Y-2,800,000 and the port was actually opened on the 1st Oct., 1907.

The harbor work covers the space enclosed by the two long dykes, east and west, which. the two long dykes, east and west, which being constructed with the object of protecting the harbor from turbulent waves and intruding sand and mud, extend as far as I mile south of the shore of Atsuta as shown in the sketch. The eastern dyke projects from the northern side of the mouth of the Amashiro river to the western direction with a length of 1482 ken of which 882 ken is built of stone and then turns southward extending 2026 ken farther. The western dyke begins at the eastern side of the mouth of the Shonai river and runs due average low water level, ordinary spring tides.

The space within the harbor is sheltered and the gentle tides and muddy bed afford a good moorage, but the limited anchorage with a depth of only 25 feet below the average low water level can accommodate only 6 vessels of

about 2,000 tons.

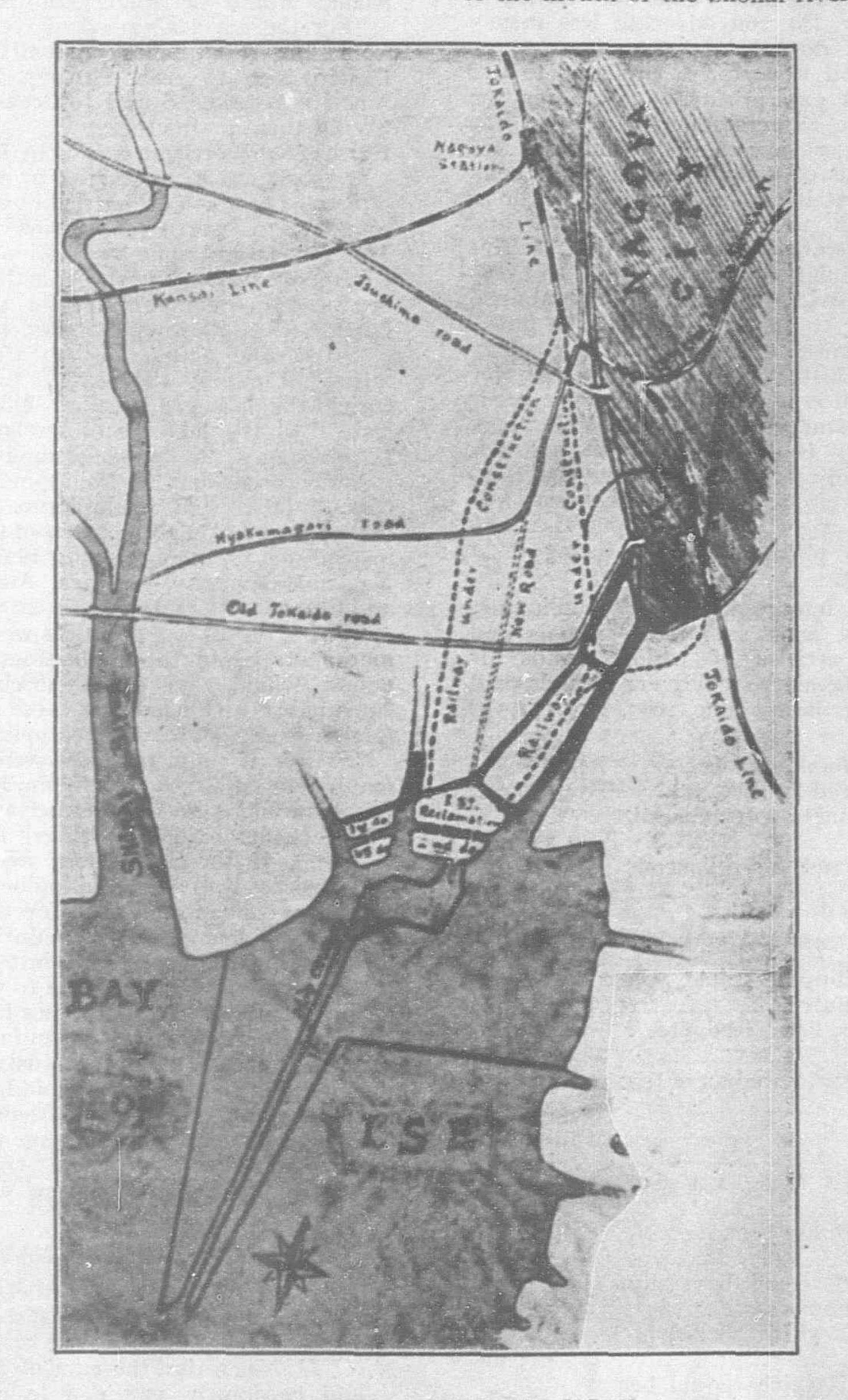
A pier is constructed from the middle of the and reclamation toward the anchorage and connected with Nagoya Proper by a broad straight road. It is built of iron pillars and double beams of iron and wood over which four railway lines are laid. It has a total length of 70 ken with a width of 71 ken and a height of 13 feet above the low water level.

Wharves are provided at a distance of 75 ken on either side of the pier on the ground sloping gradually down toward the water and each of them has a width of 15 ken.

Canals 30 ken wide, between the 1st, 2nd, 3rd, and 4th reclamations, facilitate land and water communication and on the reclamations warehouses shall be built.

The construction works of connecting railway and electric tramway lines and a broad road and bridges connecting the city and the reclamations and the reconstruction of the Horikawa and Shojin rivers are all to be completed within the fiscal year of 1909.

The project of the construction of the harbor was first proposed in the Prefectural Council in 1894, and in February 1896 the Council passed the bill appropriating the sum of -Y-1,-897,388 for the work to be disbursed in seven succeeding years. Though the harbor work was once suspended owing to an extra-ordinary tempest and flood, land works were undertaken from 1903 for which the sum of -Y-485,661 was appropriated to be disbursed in three years from the fiscal year of 1904, and then the supplementary sum of -Y-403,760 was appropriated to be disbursed during the fiscal year's from 1907 to 9. Thus the grand total of the estimated expenditure has amounted to -Y-2,786,809 and the work was prolonged to cover 14 years from 1896 to 1909.



NEW HARBOR OF NAGOYA, JAPAN

As for its communication the Tokaido railway line starting from Tokyo leads to Kyoto, Osaka, and Kobe through the city; the Kansai railway line starts from the city and leads to Yamada, Ise Province, and Osaka; while the line of the Central Railway Section also starts from the city to connect Kai and Shinano Provinces, the richest silk producing districts in the country and Tokyo in a few year. And upon the completion of the harbor construction, the port was opened for foreign trade as the port of Nagoya, the town of Atsuta close south of Nagoya proper being amalgamated with the city.

The construction of the port had been planned by Aichi Prefecture and the investigation was commenced on the 22nd May, 1896, with the estimated expenditure of -Y-1,800,000 and aftertotal expenditure including the supplementary

south for a distance of 2397 ken of which 1285 ken is built of stone. The part enclosed by those two dykes forms the whole water area of 1,735,000 tsubo and is dredged as the permanent moorage.

In the front of No. 2 and No. 4 reclamations and at a distance of 100 ken from the shore an anchorage of oblong shape 550 ken long from east to west and about 200 ken wide with a water area of 120,000 tsubo, and both sides of the pier which projects from the centre of the and reclamation and beyond 20 ken from the shore, adjoining to the anchorage, are dredged to a depth of 25 ft. below the average low water level, ordinary spring tides in order to provide for a moorage of comparatively large vessels. The ship course with a width of 20 ken leading from the entrance of the harbor to the anchorage is dredged to a depth of 20 feet below the

INDUSTRIAL EDUCATION FOR ORIENTAL PEOPLES

Europe has been watching with a great deal of interest the extravagant educational program of America in the Philippines and not only Europeans but many Americans have doubt as to the outcome of the experiment-for an experiment it is. Without questioning the motive of the American administration, there have been doubts expressed by many directly interested in this work as to the real value received for the four million pesos spent annually in the Philippines. In this connection, The FAR EASTERN REVIEW is in receipt of a copy of a letter written by a prominent educator in one of the Philippine provinces, in reply to a communication received by him in which the expenditure of vast sums of money in the Philippines for educational purposes along theoretical lines was condemned. This reply goes so directly to the root of the matter that it should be read with interest by all who desire the wise and conservative development of oriental peoples by means of practical, industrial education of a character that emphasizes the dignity of labor economically directed. The letter in part follows:

"The question of less money being spent on Education is in my opinion a serious one; a question not to be decided without the most careful consideration and investigation. What do these people need more than Education? It seems to me that there is but one answer to this question. The whole trouble or difficulty is with the kind of education they have been getting for the last seven years; and the dissatisfaction is with the results, the product of the schools. Am I not right? In my judgment to propose such a proposition is to dodge the real problem before us as a people responsible for the education of another people. Don't evade the real issue; let us make a stronger stand

59,466

1,110,810

1,788,588

1,017,508

837,940

80,624

for the education we owe this people and are in

duty bound to give them.

"If the schools could not be immediately productive of industry as well as of intelligence, and of economically valuable citizens as easily as clerks I would agree with you without hesitation; but I believe that they can be and I want to show you, for example, how this can be done from the program proposed in the papers which I have already placed in your hands. Take the sheet on rice; rice raising is the principal industry of this province. Rice Report No. 1 kept the teachers and pupils in this province busy for nearly two months learning the kinds of rice raised, the time for planting each kind, the kind of soil in which each kind grows best, the amount of water each kind needs; the average number of stalks and heads each kind produces in a square meter, the average number of grains to a head each kind produces, the size of the grain or kernel, the color and the character of the kernel, the characteristics of the rice that brings the highest price and is in greatest demand. In these investigations I have raised the questions of the kinds of rice, the kinds of soil, irrigation, what kind of rice is the best producer and what qualities go to make the kind in greatest demand-fundamental questions which every one knows, who knows anything about farming, determine in a larger measure successful rice raising.

"One town alone reports fifty kinds of rice raised; almost every town reports clay or loamy soil as best adapted to rice raising; almost every kind of rice requires much water; two varieties 'Makan' and 'Binatad' seem to produce the largest yield per hectare; in the 'Mimis' seems to bring the highest price. There is little or no doubt that the mass of farmers, particularly the small farmers, should be encouraged to raise only three or four of the best kinds of rice instead of the great number of varieties they do now; the question of irrigation is a very important one for discussion, many of the farmers could have saved their crops this year if they had tried, but had never

tried, and they didn't know how.

"Let me tell you that there is not a textbook in use in these islands or in the United States, to my knowledge, that is built up on the idea of helping the 'kiddy' to earn his daily bread but on the contrary it is based on logically preparing the youngster for a larger knowledge of the subject,—for promotion to the higher grade, to the high school, the college and the university. Examine our latest books, Coulter's Nature Study Reader, Ritchie's Lives of Plants and Copeland's new book on Agriculture, and tell me if this is not clearly true.

"What can the schools do, more than to investigate rice raising? Tobacco raising, sugar raising, or hemp raising? My program for next year will call their attention by experiments to the importance of selecting and how to select seed; how to test seed to determine whether it should be planted; how to determine how deep seed should be planted; how to determine how much sun and rain the seed demands; how fast it grows, how long it takes to come up, to blossom, to produce grains or mature, how long the grains should cure; what plant foods the rice plant requires from the soil. Do you think these experiments will not be interesting? Do you think that at the end of the year the teachers and the boys and girls won't know more about the rice plant and what it demands for its successful growth than they do now? Do you think they won't be more interested in farms and farming than they are now? Psychologically and Pedagogically I believe it is just as easy to interest boys and girls in farming and trades as it is in the office and the shop; all you have to do is to turn your guns that way. It isn't intelligent farming that our boys and girls shirk or fly from, it is slavery and the drudgery of ignorant and unintelligent farming. The farm is near to nature's heart and when you light it up it is unlimited in the field it presents for the study of the eye and the mind while the office and the shop are mightily limited. In general the plan or procedure outlined above could be carried out in the study of any agricultural plant.

"Now for a moment let us consider the manufacturing side which is brought out in 'In-

dustrial Report No. III;' the principal industries reported are the making of cloth, mats and hats, of shoes, and pottery, some furniture, carts and carromatas. Do you think it possible that we cannot in the Primary Schools give the children some training with their hands that will make them more alert in weaving cloth, mats, or hats? Do you think we cannot give them some new ideas or make them quicker and better with shoemakers' tools, or the tools for making the cart or carromata? Do you think we cannot turn them to these trades and make them economically more valuable citizens?

"I do not contend for less English or reading or writing or geography or arithmetic, but I do contend for this training and experience as the meat or subject matter of the course and the birthright of every boy and girl in these islands. What do you think would be the result in a few years if the school guns were turned in this direction? Do you advocate less money

for schools? I do not."

The Industrial Report No. 3 referred to was issued by this enterprising educator for the purpose as he expresses in the circular, "To give you a larger view of the commercial and industrial status of your own country as compared with what it could and should be, or as compared with the foremost civilized and commercial countries of the world." This interesting circular, which was sent to every school in the district, the knowledge it contained made available to the pupils and given precedence in the form of discussion over mythology and ancient history, etc., brings desirable results. It brings home to the pupil the needs of the country and points out to him just where his energy may be exercised to the best advantage not only to himself but to the community. This circular as an educational feature, is quite original and the FAR EASTERN REVIEW takes pleasure in reproducing it in part as follows:

'There are imported into the Philippines crude products, articles of food, animals and manufactured articles of various kinds for which the people of the Philippine Islands paid during the year ending June, 1907, P57,571,710 as follows:

For articles of food animals	₱18,116,894 34,552,262
iron, lead	1,759,156
articles	3,145,398

THINGS YOU EAT	
For broad stuffe flour food etc.	₱7,324,986
For milk	2,305,140
For sugar, a natural product of the islands For cheese	216,780 83,060
For butter For cocoa, with cacao a native	189,316
product	422,354
fully raised	251,998
For fresh beef, which should be	520,922
For fresh pork, which should be	485,388
For hog products, which should be	64,480
"Cannot these products be raised the Philippines? If they were then	l or made in
THE PHILIPPINESS IT THEN WERE THEY	THE DEODIE

the Philippines! If they were then the people of the Philippine Islands would be \$13,201,398 richer.

THINGS YOU WEAR

For raw cotton and clothing made of cotton you pay other coun-	
tries	P16,001,894
For raw wool and clothing made of wool	176,278
For leather used in making harness	
boots, shoes, etc	824,332
For hats and caps	174,528

"If these articles were produced or manufactured at home the people of the Philippine Islands would be \$17,177,032 richer.

THINGS YOU USE
For tobacco, a Philippine staple, you pay other countries
For vegetable fibers and textile
For oil used for medicinal, light-
ing, or lubricating purposes
For paper used in making books, magazines, newspapers, writing paper, and wrapping paper
For wood and manufactures of wood
For furniture, with the finest ca- binet woods in the forests
For crude iron and machinery, hardware, tools, cutlery, etc., made of iron and steel

4,729,110 "If these products were mined and manufactured at home the people of the Philippine Islands would be \$9,624,046 richer.

"For the articles named above there is sent from the Philippines annually to Europe P24,607,866, to Asia P19,375,388, to North America 10,360,466 and to Oceanica 3,224,276 Of these products,

P31,947,846 worth are carried by British Vessels, 12,350,840 worth are carried by Spanish Vessels 6,308,134 worth are carried by German Vessels 3,211,170 worth are carried by American Vessels and none by Filipino Vessels.

"In conclusion, if these articles were all, produced or manufactured in the Philippine Islands, the following facts are quite clear:— "First, the actual cost of the expense of

raising or mining the natural products would enrich the laborers of the Philippine Islands instead of the laborers of foreign countries.

"Second, if the manufactured articles were manufactured in the Philippine Islands, the cost of labor and manufacture would enrich the laborers and manufacturers of the Philippines instead of the laborers and manufacturers of England, Germany, America, Australia, Japan and China.

"Third, if these products were raised and manufactured in the Philippines, the Filipino people would save for themselves the large sums paid for transporting these products from foreign countries to the Philippines.

"Fourth, if these products were produced or manufactured in the Philippines, the Filipino people would save for themselves a large part of the profits made by jobbers or middlemen.

"Fifth, if these products were raised and manufactured in the Philippine Islands, the Filipino people would save for themselves the large sums of money paid as duties of customs for bringing these products into this country.

"If the above facts indicate to you that there is opportunity in the Philippines for agricultural pursuits, for mining, for manufacturing enterprises,—that the present industrial and commercial conditions can and should be changed, tell your pupils, neighbors, friends, and all of the Pilipino people about it; use your head and tongue and hands to help transform your native land into a land of peace and plenty."

THE CHINESE NAVY

Recently the question of the reorganization of the Chinese Navy was discussed by the Ministry of War and it was stated, says the N. C. D. News, that the sum of Tls. 10,000,000 should be jointly provided by the Ministries of War and of Finance for the purpose of purchasing battleships from foreign countries and of establishing naval bases, and that the annual expenses for upkeep should be equally defrayed by the provincial governments. It is reported that the new Navy will be divided into three sections, viz., the Peiyang, Nanyang and Yuehyang (Canton) Fleets. Each fleet will be composed of one large battleship, fifteen large and smaller cruisers, a number of torpedoboats, dispatch-boats, gunboats and submarines and will be commanded by an admiral. Yulingkong, in Kuangtung, and Sanmun Bay will be the bases for the Yuehyang Fleet; Chusan and Nimrod Sound for the Nanyang Fleet, and Chefoo and Taku for the Peiyang Fleet. An Admiralty will be established after naval regulations have been drawn up by the Department for the Compilation of Constitutional Laws.

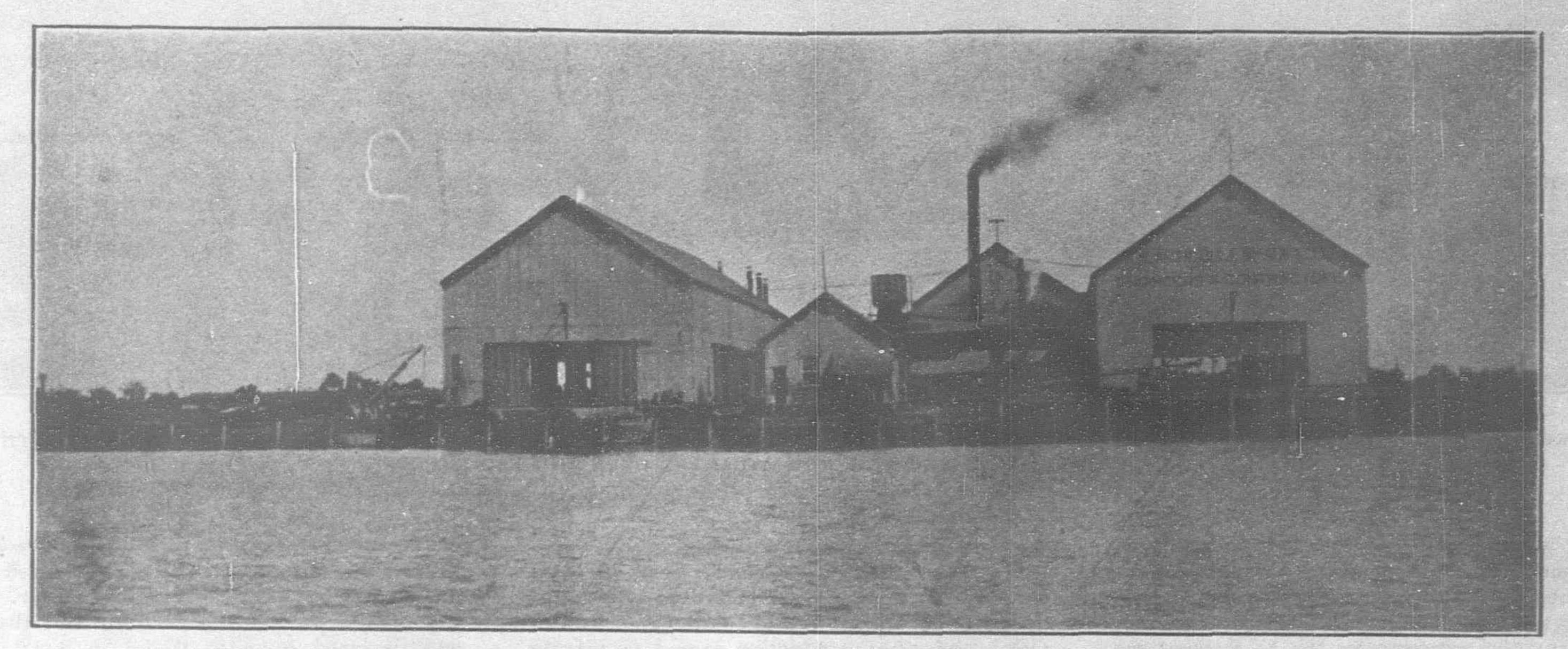
THE ATLANTIC, GULF AND PACIFIC CO.'S STRUCTURAL STEEL SHOPS

With the completion of the contract to supply over eleven miles of 42 inch pipe for the water supply system being installed for Manila; the completion of the new steel railway bridge over the Pasig for the Manila Railway Co. and the manufacture of large cylinders used in dock construction at the new port, attention is directed to the extensive works of the Atlantic Gulf and Pacific Co. in Manila, where all the

In addition to the machines enumerated above, which are used in connection with the manufacture of plate and bridge work, the company has a complete equipment for the manufacture of all classes of machine bolts and nuts, track bolts, railroad spikes and washers of all descriptions, and is at the present time supplying the Philippines government with everything it needs in this line.

structure which surmounts them. They weigh about seven tons each.

It has been a great advantage to the insular and municipal governments to have these steel cylinders and water pipe fabricated in the Philippines. In the case of the cylinders, the excessive freight rates on cylinders fabricated abroad would have made the price practically prohibitive. Under present conditions, with



FRONT VIEW OF THE ATLANTIC, GULF AND PACIFIC CO.'S STRUCTURAL STEEL SHOPS IN MANILA ON THE BANK OF THE PASIG

material used was fabricated. These shops are the only institution of the kind in the archipelago and all the labor used is Filipino, directly under American supervision.

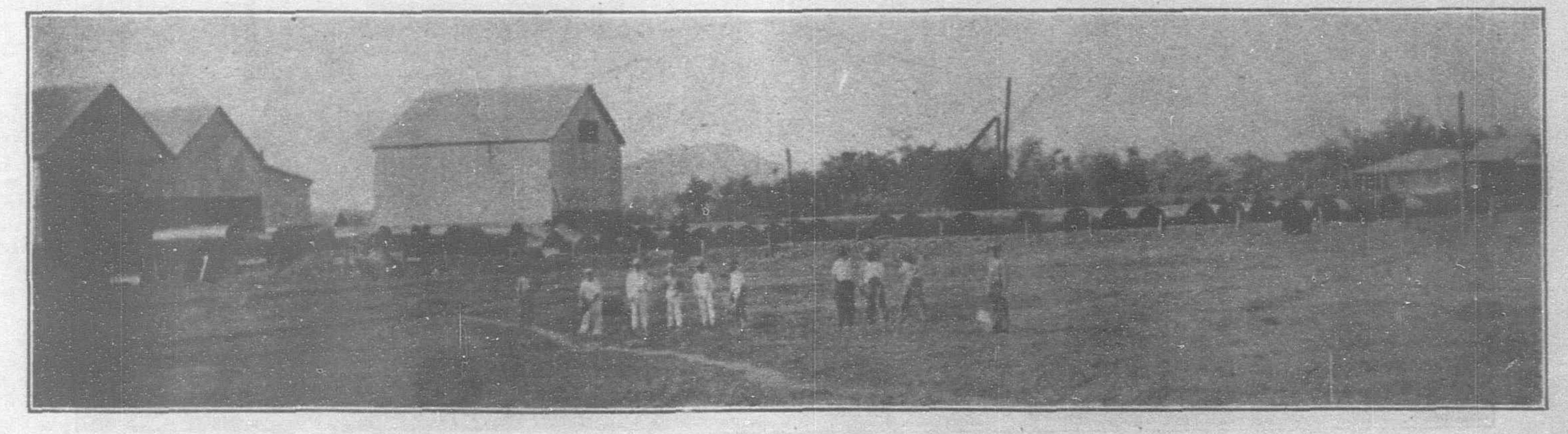
In 1906, the Atlantic, Gulf & Pacific Co. purchased 25,000 square meters of land at the junction of the San Juan and Pasig Rivers and, after raising the elevation of the property 4 feet above adjacent land, thus bringing it at all times above any danger from flood, erected the substantial buildings referred to in the llustrations accompanying this article, and

One of the most important contracts turned out by these works was the manufacture of 11 miles of 42 inch water pipe which is to carry the new water supply for the city of Manila from the dam constructed across the Mariquina River at the gorge, down through the San Mateo valley, connecting with the 24,000 feet of tunnel driven by this company. All this piping was punched, sheared, rolled, riveted, caulked and dipped in these shops.

Another important order was the fabrication of the large cylinders for the new docks which

the work being done in Manila, by the inhabitants of the islands, the most important and desirable result is the training and schooling that the Filipinos are receiving in doing this class of work while the money which would otherwise be spent abroad for the product is now kept in the archipelago, an inspiration to the inhabitants to encourage home industries.

In regard to the value of the Filipino as a laborer and mechanic, the management is satisfied that the work turned out by the native



VIEW OF THE ATLANTIC, GULF AND PACIFIC CO.'S STRUCTURAL STEEL SHOPS

which have a floor space of 30,000 square feet. These shop-buildings have been completely equipped with heavy machinery and tools of the most modern and improved type, with a view to the manufacture of steel structures of every description, multiple punches, rotary bevel shears, edge planers, power bending rolls, air riveters, lathes, planers, shapers drill presses, cold saws, etc. Compressed air is pumped to all points, and all riveting, reaming and caulking is done with air tools. This is the only shop in the Philippine Islands similarly equipped.

are being erected in Manila Bay by the Atlantic Gulf and Pacific Co. These cylinders are 6 feet 6 inches in diameter by 47 feet in length and taper for about one-third of their length, giving them the appearance at a distance of heavy ordnance. These could be seen at the site of the new docks and the unitiniated, in passing down Malecon Drive, were not sure that Uncle Sam did not intend using them for fortifications. These cylinders are placed around piles which have been driven 30 feet below water, and are then filled with concrete and serve as a foundation for the steel super-

artisan, properly trained and under competent supervision, is equal to any similar work manufactured abroad. This is given particular emphasize since these works were the first of their kind in the islands and the only labor available was that developed by the system inaugurated by the management and from raw material.

The double-track railroad bridge just completed across the Pasig River at Pandacan by the Atlantic, Gulf and Pacific Co. for the Manila Railway Co. was designed by the engineers of the contracting company, fabricated in the company's shops and erected by the company in its entirety, including the foundations. This bridge, a photograph of which is reproduced, is 450 feet over all and comprises two spans of 70 feet each and two spans of 80 feet each with a swinging span of 150 feet. Both piers and abutments are built or concrete and rest on bed rock 20 feet below water level. The total weight of steel in this bridge is 400 tons.

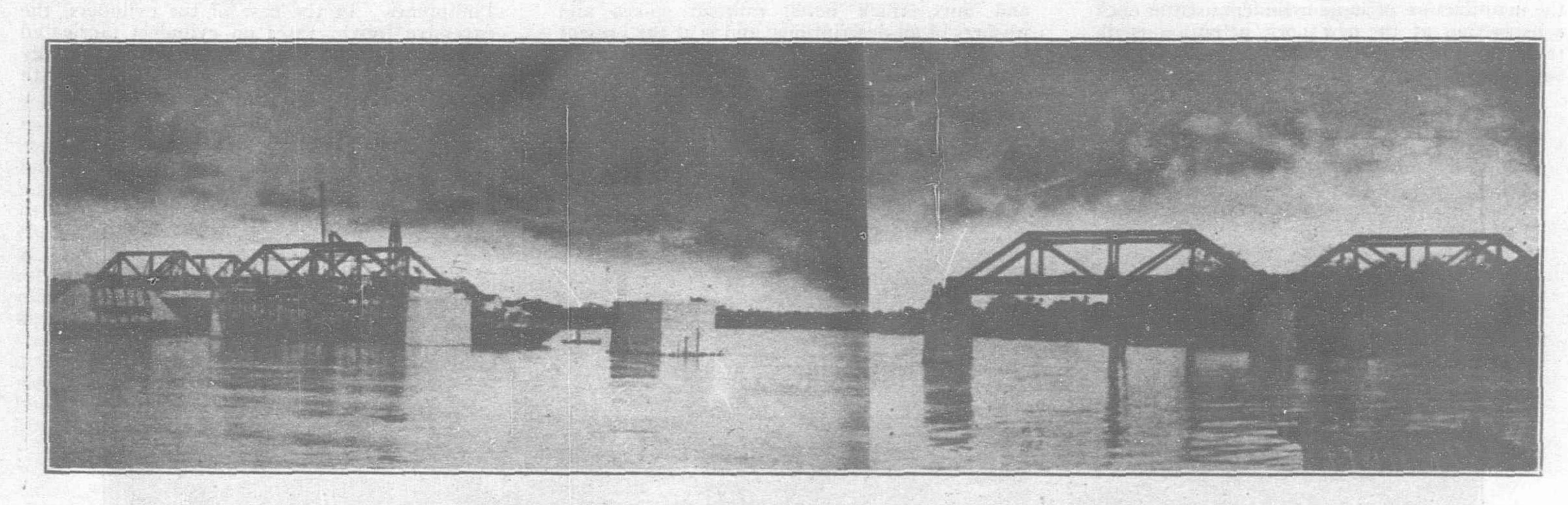
OBITUARY

Hongkong was shocked by the untimely death of Mr. A. H. Rennie, manager of the Junk Bay Flour Mills, who jumped into the harbor on April 14th, while temporary insane. It is believed that business worries were responsible for the sad tragedy. The deceased was one of the most respected and enterpris-

passing of the deceased a receiver has been appointed.

OPENING OF THE SHANGHAI-NANKING RAILWAY

The first passenger train to pass over the Shanghai-Nanking Railway made the distance between the two points at an average speed



VIEW OF THE MANILA RAILWAY CO.'S DOUBLE TRACK R. R. BRIDGE ACROSS THE PASIG IN COURSE OF ERECTION-FABRICATED IN THE

STRUCTURAL STEEL SHOPS OF THE ATLANTIC, GULF AND PACIFIC CO.

Another important feature of the work of these shops is the construction of steel tanks. Two substantial tanks, complete in the matter of design, construction and erection, were installed by the company for the U. S. Quartermaster's Department at Fort McKinley, recently. These tanks are of difficult construction, having hemispherical bottoms, built on 75 feet towers, each having a capacity of 100, 000 gallons.

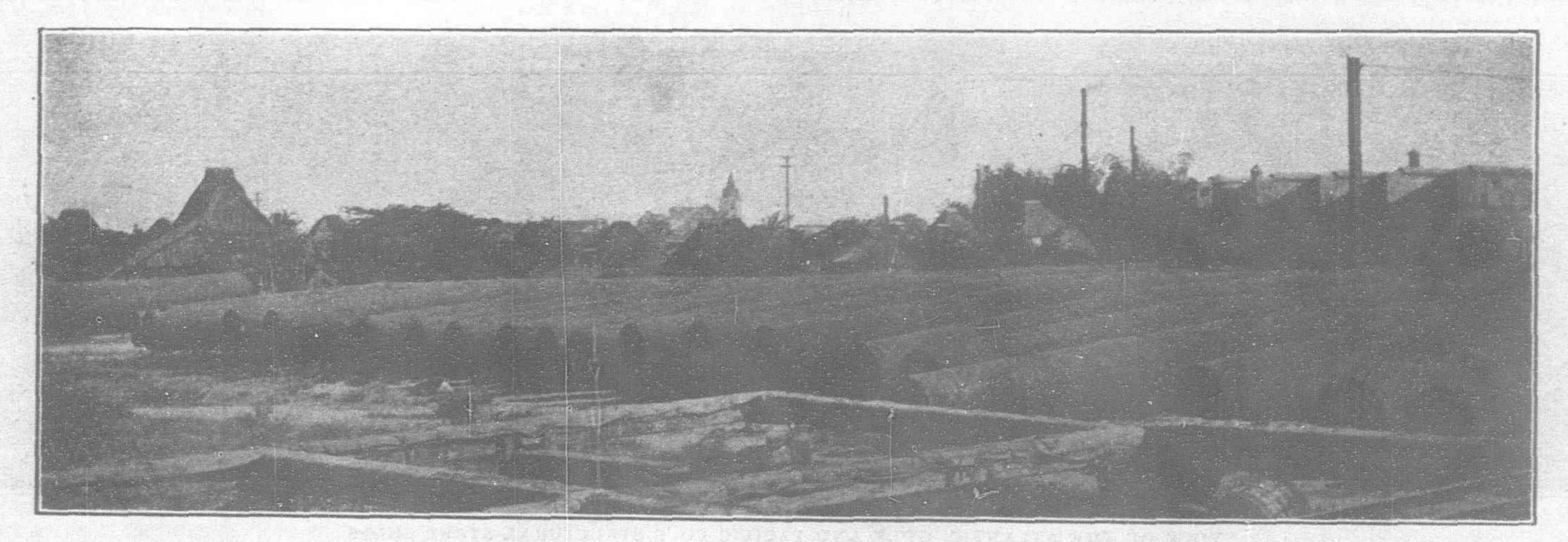
The company has now in process of fabrication, large orders of structural steel which will be diverted in the shape of highway bridges to every province in the islands. The present capacity of the plant is about 800 tons of fabricated steel a month and this will be increased from time to time to meet the demand.

ing businessmen of Hongkong.

He was a native of Canada, born in 1857. He was a graduate of Hamilton Grammar School and Upper Canada College, Toronto, Ont., and after graduation served as private secretary to Premier Norquay of Manitoba, and during his service in that capacity, which was concluded in 1889, he was delegated to negotiate a loan for that province in England. In 1890 he proceeded to Hongkong where he served the government consecutively in the positions of correspondence clerk in the public works department, acting assistant harbor master and acting superintendent of water police, and secretary of the sanitary board. In 1893 he accepted the position of representative for the Portland Flour Mills and

of 35 miles an hour or 193 miles in five hours, thirty-seven minutes. The highest speed made during the trip was 57 miles an hour. This trip was made on March 28th and the road was declared open to traffic in April. The occasion was celebrated by an excursion over the line and the following guests participated in the epoch making event:

Sir Pelham Warren, K.C.M.G., H. M. Consul-General at Shanghai, and Sir Alexander Hosie, Commercial Attaché of the British Legation at Peking, together with Messrs. P. Alderton, S. Barton, E. F. Bateman, H. T. M. Bell, F. S. A. Bourne, W. Bullard, W. A. Carlson, E. W. Clements, N. E. Cornish, P. V. Davies, D. C. Dick, Dr. J. C. Ferguson, O. M. Green, J. W. Gresson, T. H. Harris, W. F. Inglis, F. C. Macdonald, A. M.



STEEL CYLINDERS FOR NEW WHARVES 6' 6" IN DIAMETER AND 47' IN LENGTH, FABRICATED AT THE STRUCTURAL STEEL SHOPS ATLANTIC, GULF AND PACIFIC CO.

The encouragement of permanent enterprises of this character involving large investment of capital, employment of a large number of trained industrials, and the establishment of complementary industries, is a matter that should engage the attention of the progressive inhabitants of the archipelago as well as the Philippine administration and with special reference to the latter in carrying out its established policy.

Puget Sound Milling Co. and retired from the service later to look after these interests. Subsequently he interested Sir Paul Chater and Mr. H. N. Mody in the establishment of the Junk Bay Mills and according to the annual report recently submitted, the prospects for the company were all that could be expected. It is understood that fluctuations in the market involved the company in some large losses recently and since the

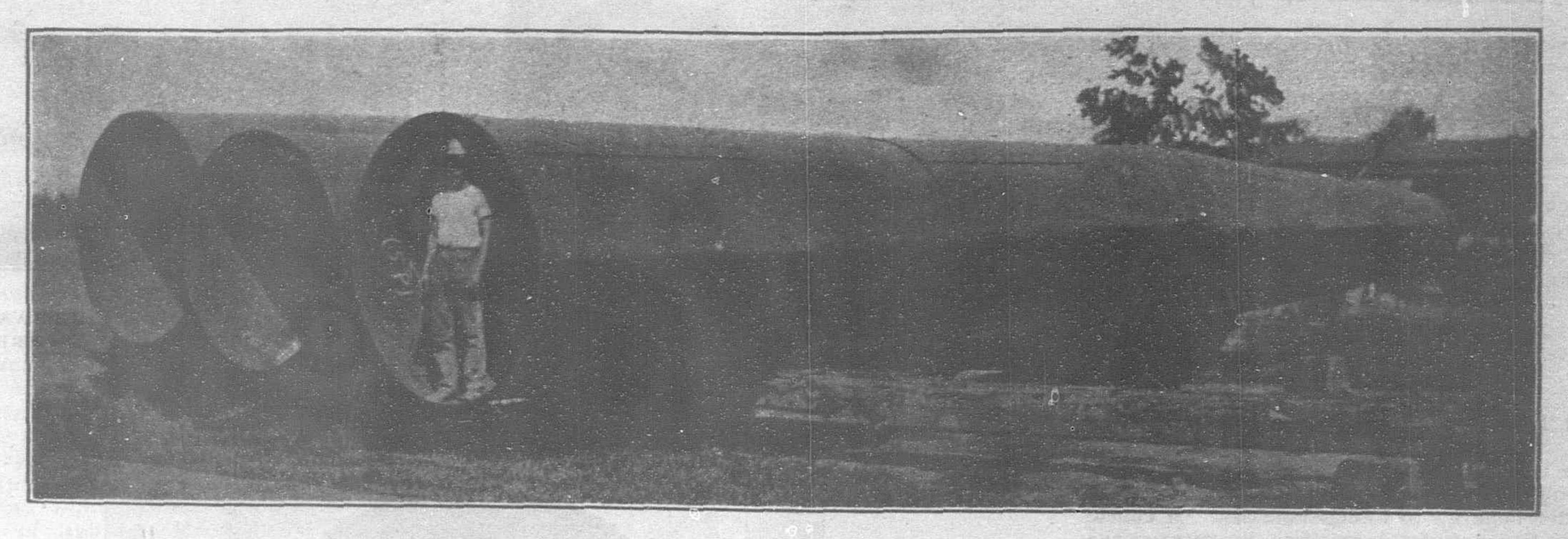
Marshall, R. B. Mauchan, A. Michie, H. Morriss, E. Morriss, Comte d'Audiffret Pasquier, C. D. Pearson, Comte de la Rochefoucauld, A. Rose, R. W. Shaw, Leo Smith, T. Weir, W. Whittall and W. R. Wright. At Soochow the train was joined by Messrs. A. W. Cross, Customs Commissioner, and G. F. H. Acheson, while at Chinkiang the following passengers boarded the train:—Mr. G. D. Pitzipios, H. M. Consul, Mr. F. E.

Taylor, Customs Commissioner, the Revs. Père Chevalier, E. Paxton, and R. Walker, Capt. Noble, R. N., and the officers of H. M. S. Britomart, the Captain and officers of H. M. S. Snipe, Drs. Shackleton, Urbanek, and J. R. Wilkinson, Messrs. J. D. Danby, R. Kähs, E. Starkey, W. A. Washbrook, Wun Taotai, Chen Taotai, and Yung Taotai, General Chun, Wong Taotai, Mr. Kwan, Deputy, and Mr. Iswong. At Chinkiang H. E. Na Ching, Deputy Vice-Minister of the Ministry of Com-

"On the other hand, every onlooker must have noticed that the charges preferred by the malcontents are vague, and every impartial person must recognise that the interval which has elapsed since the lines passed under official management has been too short to warrant any hard-and-fast deduction. What we want to hear before passing final judgment is the official version of the story, and happily that is furnished by a White Book just published under the name of Tetsudo Kokuyu-go no Shi-

be observed that all this was not completed until last October, so that the full organization has been at work for four months only. Nevertheless the Authorities claim that the results thus far have been highly satisfactory, and they adduce the following facts in support of their general contention.

"In the first place, taking the period from April 11st, 11907, to December 31st of the same year, the quantity of goods carried was 344,092 tons greater than the quantity for the corre-



CLOSER VIEW OF THE STEEL CYLINDERS FABRICATED AT THE ATLANTIC, GULF AND PACIFIC CO.'S STRUCTURAL STEEL SHOPS

munications, came on board and took tiffin with the Railway Commissioners who included Mr. C. F. Anton, Chairman of the Board of Commissioners, Mr. J. D. Smart, Taotai S. T. Sze and Taotai Wong Kokshan, Commissioners, Mr. E. Morriss, Secretary. The expedition was in the charge of Mr. A. H. Collinson, M.I.C.E., Engineer-in-Chief, Mr. A. W. U. Pope, C.I.E., Traffic Manager, Mr. H. P. Winslow, Assistant Traffic Manager, Mr. J. G. Barkley, Executive Engineer at Chinkiang, Mr. A. C. Clear, Executive Engineer at Soochow, and Messrs. G. B. Johnston, S. Leslie, and N. R. Sinclair, Assistant Engineer, Mr. E. J. Dunstan, M.I.M.E., Locomotive Superintendent, and Mr. A. T. Holt, Locomotive Inspector.

Tiffin was served on the train after leaving Chinkiang and a warm reception was given the visitors at Nanking where several toasts were drunk and speeches made by Sir Pelham Warren, H. E. Taotai Wang Kok Shan, Commissioner J. D. Smart, Dr. J C. Ferguson, Sir Alexander Hosie, Mr. C. E. Anton, chairman of the board of commissioners, and Mr. A. H. Collinson, engineer-in-chief. The last speaker announced that while the road was under construction and only half the mileage available over three million passengers had been carried which indicated that the facilities for traveling were appreciated and he believed the road was not only up to the standard but would prove a very profitable investment.

The following is a table of the distances travelled:—

	Miles
Shanghai	
Soochow	. 53 47
Wusieh	The second secon
Changchow	.103 94
Tangyang	
Chinkiang	.150.33
Nanking	.193.02

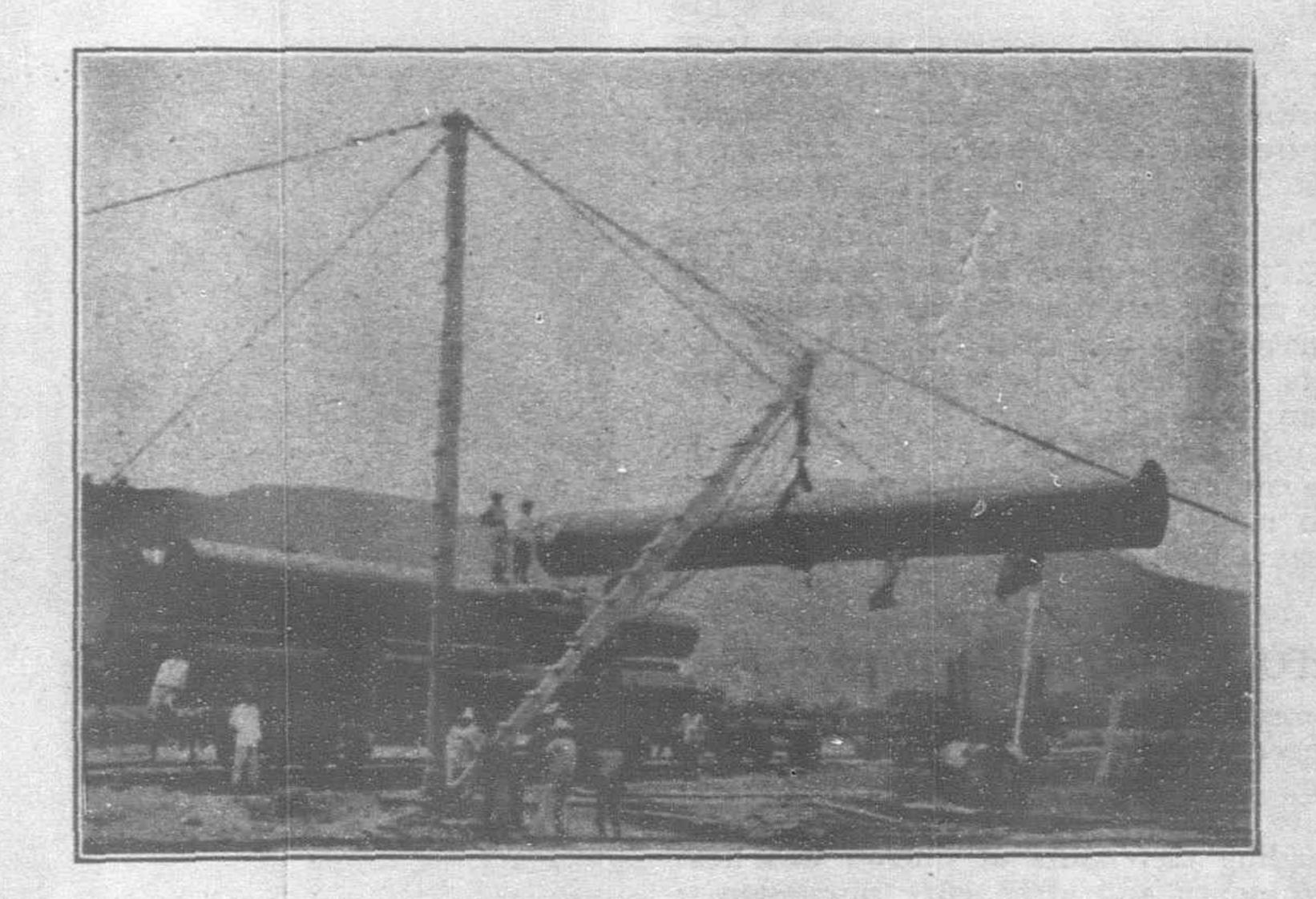
NATIONALIZATION OF RAILWAYS IN JAPAN

There is no more interesting question in the field of Japan's domestic politics than that of her nationalized railways," says the Japan Mail in reviewing the White Book just published by the Japanese Government on the progress made in this direction. "If public opinion be trustworthy," that paper continues, "the experiment of nationalization has proved a failure and the political parties of the Diet show almost unprecedented unanimity in calling for a radical modification of the existing system.

setsu narabi ni Seiseki. This is a tolerably bulky volume containing many tables, but we can condense it so as to give to our readers a sufficiently clear precis of the information contained without inflicting wearisome details.

"Immediately on the promulgation of the Nationalization Law effect was given to its provisions, and between October, 1906, and December of the same year six private roads were taken over, namely, the Tanko, the Kobu, the Nippon, the Ganyetsu, the Sanyo and the Nishinari. In April of the following year (1907) steps were taken for introducing homogeneity into the administration of these lines, and for that purpose a central railway bureau was established, with administrating offices in 13 provincial localities and a managing bureau in Hokkaido. Then between July and October of the same year (1907) eleven more private

sponding period of 1906, and the gross earnings from the traffic showed an increase of 920,162 yen. In considering these figures it is necessary to remember that a serious interruption was caused by the inundation of last autumn and by he great military maneuvres. Another point to be noted is that a marked reduction was effected in rates of freight, and that a sliding scale was introduced so as to cheapen charges in proportion to distance. This was rendered possible by the economies and facilities resulting from the unification of a number of roads which had hitherto been operated independently, and to the same cause is attributed the fact that greatly increased celerity was attained in transport business. There was also a marked increase in the number of passengers, so that the daily income from each seat grew from 60.1 sen in 1906 to 65.7



ATLANTIC, GULF & PACIFIC CO. UNLOADING 42" STEEL PIPE AT
MONTALBON FOR THE PIPE LINE

of lines with a total, length of 4,500 miles, a total capital of 600 million yen and a staff of 80,000 employees. Another bureau of management was now established in Kyushu and the administrating offices were increased by two, the whole system thus consisting of one central bureau, two managing bureaus and 15 local administrating offices. It will

cheapening of charges had taken place, the first class ticket from Awomori to Nagasaki being reduced from 34.23 yen to 26.38, the second-class from 25.35 to 15.86, and the third class from 19.78 to 10.51.

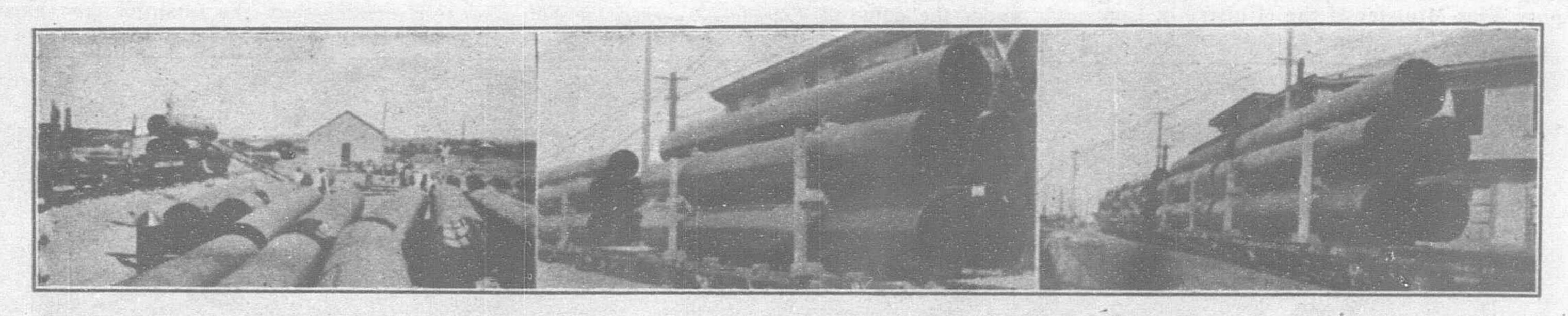
"In the second place, direct connexions were established with the following S.S. companies and over-sea railways, namely, the Osaka

Shosen Kaisha's line to Tairen, the railways in Korea and the Osaka Shosen Kaisha's line to Formosa. It is further in contemplation to establish connexions with the South Manchuria Railway, the East China Railway via Tsuruga and the Chinese Railways. The Bureau's report alleges that strenuous efforts have been made to increase the comfort of guests; that agreements have been concluded

out circulars inviting subscriptions to an issue of debentures amounting to \$2,000,000, that is 400,000 debentures of \$5 each, payable in instalments of 20, 30, and 50 per cent, the last instalment to be completed before the end of 1910.

This sum of two million dollars is to cover the initial cost of the line only. The total cost of the line to Weih-Hsien is estimated at \$10,000,000. The merchants will invite further subscriptions when necessary, later on. For-eigners will not be allowed to purchase debentures from the native holders.

The farmers and other owners who will have to be expropriated of their lands for the construction of the proposed route will be paid for their property in debentures but not in specie.



(1) UNLOADING 42" RIVETED STEEL PIPE AT SAN MATEO FOR MANILA WATERWORKS.—(2) STEEL PIPE LOADED ON MANILA RAILWAY CO.'S CARS.—(3) ANOTHER VIEW OF PIPE IN TRANSIT.—FABRICATED BY THE ATLANTIC, GULF AND PACIFIC STRUCTURAL STEEL WORKS

with Messrs. T. Cook & Company and with the Society Wagons-lit, and that relations have been effected with all the principal hotels throughout the country with a view to giving greater facilities to foreign tourists. Of course there has not yet been time to witness the results of these various arrangements.

"Turning to telegraphs and telegrams, we find that the total length of lines in operation when the roads were taken over was 22,303 miles; that it has been increased to 22,740 miles; that 3,873 miles will be added during the current year and that 5,483 miles are projected.

"There has of course been much to do in reducing the rolling stock to something like uniformity but the report necessarily fails to give any clear indications of the progress effected in that direction.

Finally we have the financial side of the question set forth as follows:

Official Estimate of the Working of all the Nationalized Lines during the Year commenced April 1st, 1907, and ending March 31st, 1908:—

Gross Revenue Expenditures Net Profit Actual Results of 3 months' wo April 1st, 1907, to December 31st Gross Earnings Expenditures	, 1907:— 52,864,867 24,830,014
Net Profit	28,034,852

It will be observed that the estimate of gross profits will probably prove to have been a little over the mark, but the actual expenditures being considerably less than the estimate, the net profits are likely to be some 5 million yen more than was anticipated.

It must be admitted that all these facts do not go to confirm the pessimistic views expressed in so many quarter. One is led to think rather that a final judgment is premature."

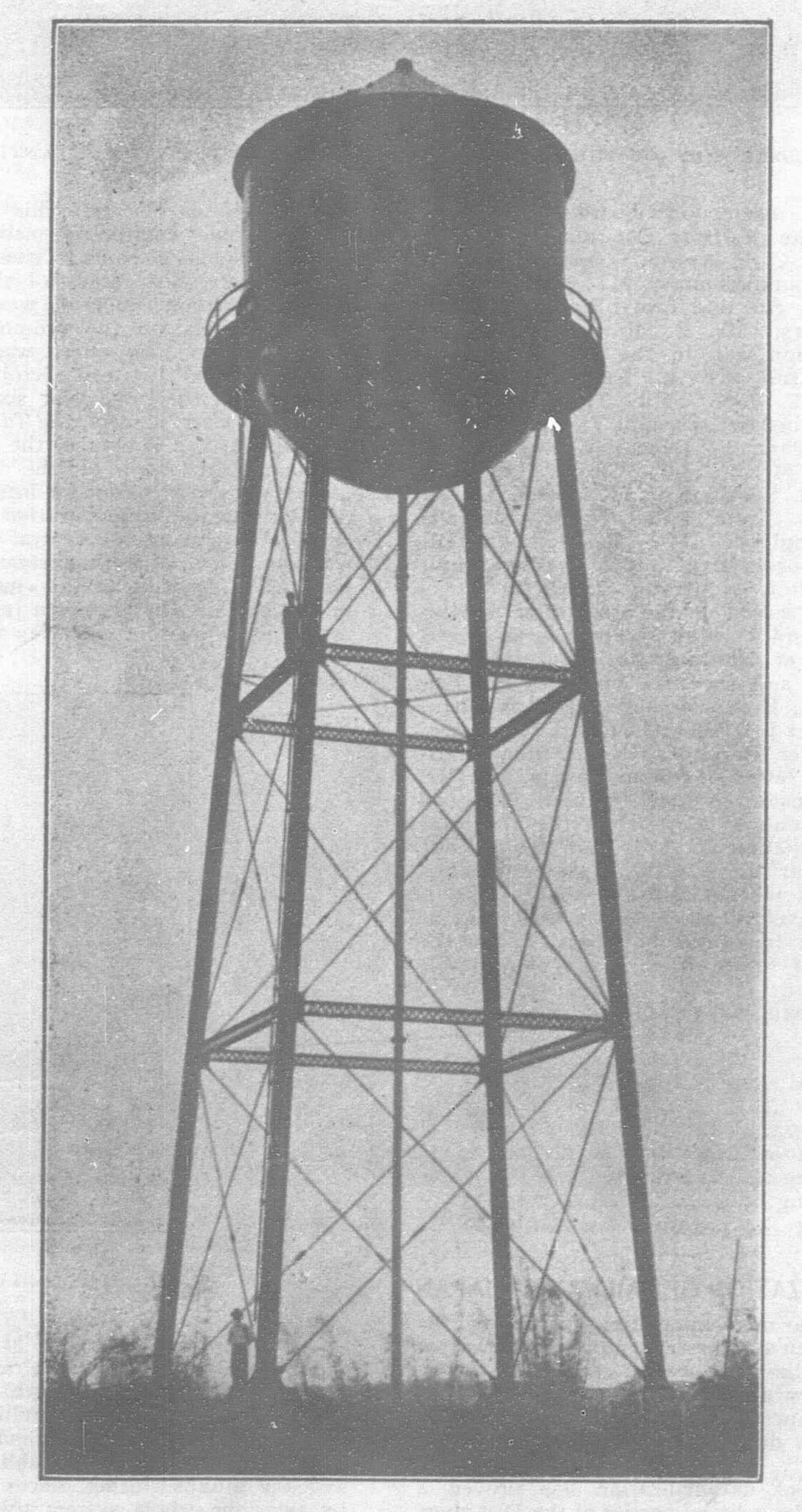
CHEFOO HARBOR IMPROVEMENT

The prospect for the early construction of a greatly needed breakwater for Chefoo harbor is growing brighter.

The P. & T. Times announces that a meeting of the leading merchants of Chefoo was held early last month and after some discussion it was decided that the necessary improvements would cost about 2,000,000 dollars and half the amount was immediately subscribed by those present. It was decided to proceed with the work at once and raise the balance necessary later on. It is also proposed to levy a tax on steamers to meet part of the deficiency.

PROPOSED CHEFOO-WEIH HSIEN RAILWAY

According to the correspondent of the P. & T. Times at a recent meeting of the leading native merchants at Chefoo it was decided to send



STEEL TANK WITH 75 FOOT TOWER—CAPACITY 100,000 GALS.
FABRICATED AT THE ATLANTIC, GULF AND PACIFIC CO.'S
STRUCTURAL STEEL SHOPS

REPORT ON CONCRETE FOR STREET PAVEMENT

Messrs. W. H. Anderson & Co., of Manila, are in receipt of the following communication from Mr. Fred R. Charles, city engineer of the city of Richmond, Indiana, which contains a report of the latter on the success with which concrete has been used in street paving in his department and is self explanatory. The letter and enclosure follow:

DEPARTMENT OF CITY CIVIL ENGINEER

Richmond, Indiana, March 23, 1908.

MESSRS. W. H. ANDERSON & Co.,

Manila, Philippine Islands.

GENTLEMEN:

I have just received your letter of February 14th inquiring about our concrete roadways. You have been misinformed as to the amount we have, which is not 25 or 30 miles at all, but we have an increasing amount of them, which are proving satisfactory. It forms a pavement in the same class with vitrified brick, and for most localities is considerably cheaper. For durability it ranks with brick, and for slipperiness it is no worse. It is strictly sanitary; exposing no interstices to catch dirt and filth, and can be flushed with water with no injury resulting. For an ordinary street of light or medium traffic, we put down a foundation of gravel or broken stone, 8 inches thick, then six inches thick of concrete made in proportion of 1.2-5; then finish coat 11/2 inches thick, made I cement, 2 sand. Finish with float surface as rough as possible.

For heavy traffic streets, put down on the foundation 6 inches of concrete proportioned 1-3-6; allow to harden, then cover with sand or tar paper; then put on three inches concrete, 1-2-5 and finish with one and one half inches, 1 to 2.

This permits of renewing the surface, in case of wearing out, without distributing the concrete base. In renewing, the old concrete can be broken up or crushed, and used for the aggregate for the new concrete. A rough sketch is shown on reverse side of this sheet.

Very truly,
FRED R. CHARLES.

REPORT OF CITY ENGINEER.

The concrete pavements at Richmond have attracted considerable attention, and in answer to numerous inquiries and as a matter of general interest, I have today made a thorough examination of these pavements and find condition as follows:

First, I may give some data as to time of construction, cost, nature of traffic, etc. The alley adjacent to the Wescott Hotel was put down in 1896, thus having been down about II years. Owing to a settlement of gravel around the foundation of the hotel, the pavement has settled slightly in places, but this settlement which would be disastrous to almost any other kind of pavement, has only resulted in a slight unevenness of the blocks, and otherwise the pavements show almost no sign of wear, although being a narrow alley it carries a large amount of traffic concentrated in a small space. The cost at the time 18 cents per square foot. In 1901 two other important alleys carrying large traffic were paved. In 1902 Sailor street was paved at a cost of 14-1/2 cents This street is in almost perfect condition. Last fall it was necessary to cut a trench through this pavement to lay underground telephone conduits and it was with the utmots difficulty that the concrete could be broken, after laying the conduit the pavement was very carefully repaired, and seems as good

as new. In 1903 a very busy intersection at North 7th & A street was paved with concrete at a cost of 16-1/2 cents per sq. it., and in 1904 Elm place was paved at a cost of 13 cents per sq. ft. The latter street is adjacent to a hotel and some wholesale establishments, and over it is done some very heavy hauling specially from the hardware and iron storage house of Hones Bro., wholesale and retail dealers in hardware. These pavements show a little chipping at the edges of the joints, left for a contraction and expansion and have an occasional temperature crack, but none of these cause any serious detriment, and otherwise the pavements show almost no signs of wear, and will apparently last for years to come, with no repairs or maintenance charges. In addition to those mentioned we have a number of other alleys paved with concrete and during last season on alleys and streets we put down 3 500 square yards. Our citizens are very well satisfied with this pavement. It is very easy cleaned and thus is first class from an aesthetic and sanitary point of view. It is low in first cost, compared to brick, asphalt or bitulithic. Cost for repairs and maintenance will be nothing for a great many years, and life of the pavement will apparently be far greater than any of those mentioned. It is a little slippery for horses but not more so than brick, and considerably less so than asphalt. Considering it from all points, we consider this form of pavement a success.

HON. JOSE M. LERMA

The Hon. José M. Lerma, Representative to the Philippine Assembly from the province of Bataan, Philippine Islands, and member of the Committee on Agriculture, was



HON. JOSÉ M. LERMA

born in the district of Quiapo, Manila, on April 3rd, 1858, and educated in the college of San Juan de Letran and the Ateneo de Manila, graduating from the latter institution as an expert accountant. Mr. Lerma has always taken the greatest interest in the development of the agricultural resources of his native land and is ever ready to further the introduction of modern methods in farming. As a merchant he is one of the largest importers of agricultural machinery and is the representative of several of the most important manufacturing houses in England, Scotland and America. In 1900 he was appointed inspector of the province of Bataan and

served faithfully in restoring the country to peace and tranquility, using his personal influence to lighten the suffering of political prisoners and to secure to them their liberty. As a reward for his services he was appointed provincial secretary by Governor Taft in 1900 and in 1902 he was elected by popular vote to the governorship of the province When his name was proposed for the second nomination, his political opponents filed charges against him, for the purpose of embarrassing him but he was exonerated and when the election for representatives to the assembly was held the people of Bataan evidenced their confidence in him by returning him with a comfortable majority. Mr. Lerma is devoting his time to the securing of legislation for the benefit of the agricultural industry which is suffering from depression and will endeavor to interest the assembly in passing favorable laws providing for the construction of irrigation works in every section of the islands where it would benefit the farmers; the opening up of new markets for farm products; in the reduction of the customs' tariff; the reduction of taxes and the increase of facilities for transportation.

Mr. Lerma's political career began when he was appointed delegate to the Revolutionary Congress at Malolos in 1898.

COAL BIDS OPENED

The bids submitted for the delivery of 60,000 tons of coal to the Chief Quarter-master's Department of the Division of the Philippines were opened in the office of the Chief Quartermaster Manila, May 2nd, 1908, and follow in U. S. C.:

Macondray and Company, Wallsend coal delivered to all ports \$5.09.

Macleod and Company, Duckenfield coal for Manila \$5.32. The same for Iloilo and Cebu \$5.57, Camp Overton, Zamboanga and Jolo \$5.67.

Mr. F. T. Figueras, representing W. Scott-Fell and Company of Australia, Lithgow coal \$5.44, Wallsend coal \$5.50, Mt. Kemblae, Corrimal and South Clifton coals \$5.50 for all ports. The firm agreeing to furnish at least fifty per cent of South Clifton and Mt. Kemblae coal.

H. W. Peabody and Company, Aberdare or West Wallsend coals \$5.47 for Manila. Outports \$6.42. Selection of coal at bidder's option.

W. F. Stevenson and Company, Aberdare or Wallsend coal \$5 345 for all ports. Selection of coal at quartermaster's option.

The bids have been taken under advisement and a decision is expected at an early date.

The present contract called for South Clifton coal at \$5.60 per ton.

Proposals for the supply of 36,000 tons of coal to the Philippines Government were opened by the director of the Bureau of Supply, Manila, on May 5th, and the following bidders were represented, the prices quoted being in Philippine Currency:

Messrs. W. F. Stevenson and Company; West Wallsend coal: Manila P11.70, Iloilo 12.45, Cebu 12.20, Zamboanga, Tacloban, Jolo, Romblon, Legaspi 12.70.

Macleod and Company; Duckenfield coal: Manila P11.65, Iloilo 12.14, Cebu 12.04, Zamboanga, Tacloban, Jolo, Romblon 13.64, Legaspi 14.14.

Macondray and Company, Newcastle Wallsend. West Wallsend or Duckenfield coal: Manila 11.47, Iloilo 12.22, Cebu 12.22, Zamboanga, Tacloban, Jolo, Romblon 12.47, Legaspi 12.47.

F. T. Figueras, Lithgow coal: Manila P11.14, Iloilo 12.29, Cebu 12.29, Zamboanga, Tacloban, Jolo, Romblon 12 57, Legaspi 13 00. The same firm offered Mt. Kembla, Corrimal or Newcastle Wallsend coals for Manila at 12.00, Iloilo 13 16. Cebu 13 16. Zamboanga, Tacloban, Jolo, Romblon and Legaspi 13.50.

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SHANGHAI-SUNGKIANG RAILWAY

The opening of the railway which is to join Shanghai with Hanchow and Ningpo, as far as Sunkiang, a distance of 24 miles, on April 20th, for passenger and freight traffic was made the subject of favorable comment by the Shanghai Times with special reference to the fact that the entire project has been carried out by

Chinese. The Times says:

"In the midst of all the commotion about loans and concessions this line has gone quietly ahead, gradually covering the miles between here and Sungkiang, and at length is able to carry traffic between the two cities. The whole scheme, down to the minutest detail, has been carried out by Chinese. The whole of the permanent way has been supplied from Chinese sources, and much of the rolling stock also. Unforeseen difficulties with the quarry proprietors alone have prevented the present section being fully opened for passenger and goods traffic even before this. As it is, a limited freight traffic is to be commenced from to-day, and we may expect soon to see the line working full time.

"Bridging and permanent way appear to be alike thoroughly sound, and it is to be hoped that all succeeding Chinese railways will hold by this tradition. Sound workmanship at the beginning will save a vast expense in repairs and up-keep later on, and any other policy is a policy of waste: There appears little doubt that the Chinese, whom Dr. Arthur Smith has described as the most economical people in the world, will see the wisdom of building

the best they know.

"The district through which the railway runs is apparently one of great agricultural wealth.

"Those of us who are acquainted with the excellent investments that agricultural light railways have become in some parts of Europe and America may easily understand the boon that such a railway must be in a district like that through which the line of which we are speaking runs. It seems probable that the line will be a highly successful enterprise. There are no longer the prejudices against new modes of locomotion and communication that existed in China a generation ago and it may be expected that the peasantry will from the first avail themselves of all the advantages which the line offers them. The covering of China with a network of lines opening up districts like that between Shanghai and Sungkiang would result in an enormous increase in the trade of the Empire."

FRENCH POWER STATION AT SHANGHAI

The new power station of the Cie. Française de Tramways et d'Eclairage de Shanghai at Lokawei is described by the N. C. Daily News as follows:

"The Lokawei Station is designed to supply current for both tramways and electric light in the French Settlement, the same engines and dynamos serving both purposes, with one difference—that for tramways the dynamos are hyper-compounded i. e., the winding in series of the magnet is in the circuit, whereas for lighting the excitation is shunt only.

"In the Boiler Room three boilers of the Babcock and Wilcox type, with superheaters, have been erected and two more are expected shortly. The heating surface of each boiler is 2,250 sq. ft., the grate area being 43 sq. ft., the production of steam 6,600 lb. per hour and the pressure about 135 lb. per square inch. A "Green Economiser," driven by an electric motor, supplies the necessary water at a temperature of 175° Fahr. Two feed pumps, one Worthington and the other electric triplex,

feed the boilers.

"In the Engine Room are three groups of 250 kilowatts and one group of 50 kilowatts has been erected and another group of 350 K. W. will be added in the course of a few months. Each group of 250 K. W. (600 Volts×415 Amperes) is driven by a compound horizontal steam engine working at 125 revolutions per minute. The 50 K. W. group is driven by a rider extension engine at 200 revolutions per minute. This dynamo is of the Dolivo Dobrowsky Patent (500 Volts×100 amperes) and a self induction coil will allow the dynamo to be used for the three wire distributing system.

All the engines have surface condensers but for the time being will be used as non-condensing for the supply of water from the creek is not

complete.

"For the distribution of current for lighting purposes the three wire system has been adopted and two equalizers working either as generators or motors will regulate the distribution of the current. The switchboard is divided into two sections, one for tramways and the other for light. Automatic circuit breakers are fixed for both purposes. Hand circuit breakers are so disposed that they may be put in connexion either with the tram bars or the light bars according to the use of the dynamos.

"The rolling stock at present in the car sheds consists of 28 cars exactly similar to those in use in the International Settlement."

Forty members of the Shanghai Society of Engineers and Architects headed by President H. King Hiller visited the plant April 25th and were taken over the property by General Manager and Engineer-in-Chief M. M. Coursier, Resident Engineer M. Chateau and M. Murat Electrical Engineer.

WELCOME SOCIETY FOR JAVA

A correspondent of the FAR EASTERN REVIEW, writing from Batavia, advises that the Dutch Government has granted a subsidy of 25,000 guilders for the establishment of a Welcome Society for the reception of tourists in that delightful colony. An equal amount to that subscribed by the enterprising government has been advanced by the businessmen of Java. The organization is now perfected and visitors to Batavia will be provided with attractive guide books in English and guides speaking the English language, and thoroughly versed in the attractions of the colony, will be made available to tourists.

This innovation will be gladly welcomed by visitors to the colony and is an indication of the progressive spirit abroad among the

businessmen of Java.

ANOTHER HONGKONG AIRSHIP

The latest competitor for recognition as an aerial navigator is introduced by the *China Mail* in the person of Mr. George Lanzius, the well-known mining expert of Hongkong, who intends patenting his airship in America. The following description is given by the

Mail:

"It is to be built entirely of aluminum, cigar shaped and comprising a total weight of 20 tons and a carrying capacity of 20 tons. She will run in any reasonable weather 40 miles an hour with a carrying capacity of 20 tons; her actual horse power will be 600 and the engines weigh 5 tons maximum. She will be able to float in the air for an indefinite period but under way at 40 miles an hour she will be able to travel a distance of 2,000 miles.

"Mr. Lanzius claims that the atmospheric pressure will have no effect whatever on his airship and during the various climatic conditions through which it passes, it will be unnecessary to discharge any gas in order to keep it at the required distance from terra firma This also does away with the necessity of carrying ballast.

"Although it is extremely unlikely that an accident will happen," proceeded Mr. Lanzius, "it will be so constructed that it will descend like a parachute and remain within a distance

of ten feet from the ground."

The inventor has been working at the scheme for the last nineteen years, and its primary object is to be used for commerce, and in this respect our informant is confident it will ultimately be possible to convey the mails from London to Hongkong in twelve days, or from London to New York in two days, not to mention getting round the world in well under twenty days, which is only half the time it is possible to do the distance in at the present time.

It is not an airship but rather of the nature, as Mr. Lanzius preferred to term it, of a balloon, and will be entirely different from that invented

by Count Zeppelin of Germany.

This is the second aerial machine devised in Hongkong, the first (as described in the China Mail some time ago) being invented by Mr. Tse Tsan Tai.

NEW PUBLICATIONS

Subject Matter Index on Mining, Mechanical and Metallurgical Literature for the Year 1902, issued by the North of England Institute of Mining Engineers and edited by the Secretary, Mr. M. Walton Brown, is a remarkable compilation of references upon subjects of special interest to mining and mechanical engineers. It contains an alphabetical list of publications indexed geographically; index to the alphabetical list and a subject matter index covering every conceivable subject as well as an index of authors. Published by the Institute at Newcastle-upon-Tyne, Eng.—Price, 42 shillings.

Manila, The Pearl of the Orient, by The Manila Merchants' Association, is a new guide book to the Philippines containing an interesting compilation of the attractions of the capital city, Manila. It is distributed by the Association and, as announced in the preface, its purpose is to disseminate information among the tourists about Manila, many of whom, according to the editor, who quotes Mr. Dooley's friend Hennessy, "Hardly know whether the Philippines are Islands or canned go ids." The volume is appropriately illustrated and contains maps of the Walled City, the City of Manila and the Philippine Islands.

Railway Enterprise in China, by P. H. Kent, and published by Edward Arnold, London, Eng., is received. The author announces in the preface that his aim is to give a succinct and unbiassed history of the origin and growth of railway enterprise in China, an important feature of the Far Eastern Question, and that the arrangement of the matter is not strictly chronological but rather chronological, subject to geographical conditions. The volume fully meets the purpose announced by the author and is probably the most valuable publication, as a source of authentic information, that has come out of the Orient and will prove of the greatest value to students of Chinese history. The author divides his subject into three stages—the history of the attempts made by foreigners to allow the introduction of railways; a progressive movement emanating from the Chinese themselves, and the era of concessions in which the dominant feature is foreign control. The volume comprises eighteen chapters with appendices containing the different concessions and loan agreements relative to the railways, together with maps of the different defined systems and a general railway map of China. Price 12s. 6d. Net.

The Directory & Chronicle for China, Japan, Corea, Indo-China, Straits Settlements, Malay States, Siam, Netherlands India, Borneo, The Philippines, Etc., for the year 1908 (forty-sixth year of publication), issued from the Hongkong Press Office, Hongkong, has reached our desk and is well up to the standard of previous publications with the compilation brought up to date. Price 30 shillings Net.

Jubilee Number of The Indian and Eastern Engineer is more than a representative issue of the oldest engineering journal in the East. It was established by Messrs. W. Newman & Co. in April, 1853, and during its history it has been associated with the marked development of India and the East. The Jubilee issue contains articles reproduced from the publication appearing fifty years ago, among which is the reproduction of photographs of the launching of the Great Eastern, the greatest engineering event of that period. Besides these special features the journal is replete with interesting articles that bring the publication up to its highest standard. "The Railway Question in Manchuria" is the subject of special comment and an illustrated description of the Barsi Light Railway, the finest in India, takes up an important space in this issue. Among the other subjects dealt with in "Notes on Current Engineering" are: "The Conquest of the Air," "L'Houille Blanche' (White Coal). A French colloquialism for electricity derived from water-power). "The Gyroscope," "Windmills & Electric Power."

FAR EASTERN COMPANY REPORTS

SIAM COMMERCIAL BANK, LIMITED.—The report for the half-year ended March 31st showed a net profit of Ticals 183.511.49. Out of this the usual dividend of 5% was directed paid and the balance carried to the reserve funds, following the general policy of the bank for a continuous strengthening of the reserves.

THE DEUTSCHE BANK.—The gross profits at the end of the year 1907, including £55 790 brought forward, were £2,678,928, disposed of as follows: Dividend of 12% absorbing £1,-200,000; £91,596 to reserves; £45,161 to the directors; £22,500 to the superannuation fund and gratuities to the staff and £56,500 carried forward to new account.

THE NATIONAL BANK OF INDIA.—The net profits for the half year ended December 31st, 1907, and including the amount brought forward from the previous term amounted to £364,000. The directors recommended the payment of a dividend for the term of 12% per annum; to write off £10,000 depreciation house property account; to carry £10,000 to the pension fund; to capitalize £200,000 by issuing 16,000 bonus shares of £25 each on which £12 10s. will be credited as paid and allotted to present shareholders in the proportion of one share to every three shares held, and the balance of £72,000 to be carried forward.

MERCANTILE BANK OF INDIA.—The directors of this institution recommended a dividend of 6% per annum on A, B, shares, free of income tax; £40,000 carried to reserve fund; £2,000 to officers' fund and £24,600 carried forward.

FRASER & NEAVE, LIMITED.—The tenth annual report for the year ending December 31st, submitted by the directors, places the credit to profit and loss, after writing off depreciation and bad debts, for the year at \$53,814.35 and with \$20,529.09, carried forward from last account, gave the sum of \$74,-343 44 recommended disposed of as follows:

The payment of a dividend of 15% and bonus of 2.5% absorbing \$39,375 00; \$10,000 to the general reserve, and the balance of \$24,968.44 carried forward. The appropriation to the reserve brings it up to \$132,500.

ROYAL JOHORE TIN MINING Co., LIMIT-ED.—The report for the year ending February 20th, 1908, shows, after writing off working expenses and \$1,138 for prospecting, \$2,002 for cost of furniture, ore bags, repairs and depreciations, and \$764 for bad debts, at the credit of profit and loss account a net profit of \$1,174, which was carried forward.

EASTERN SMELTING Co., LIMITED.—The statutory meeting of this company was held in March and the board of directors were chosen. The payment of \$10 for every meeting attended and 2.5% of the net profits, after a 10% dividend is paid the shareholders, was authorized as remuneration for the directors.

Union Insurance Company of Canton, Limited.—The following is the recommendations made by the board of directors in the report submitted at the annual meeting held April 23rd:

The balance of working account on 31st

December 1907 was \$2,506,011.22.

The board recommends that an interim dividend of \$30 per share be paid to share-holders, absorbing \$372,000, and that a bonus of 20 per cent be paid to contributors, absorbing about \$250,000, and that the remainder be carried forward.

JOHN TRAVERS & SONS, LIMITED.—The profit for the year to which was added £11,228, brought forward from previous account, made in all £30,726 to the credit of profit and

loss. After paying off interest, etc., the available balance was £6,655. The directors transferred £5,000 from the Reserve and a final dividend of 25% making 5% in all for the year was directed paid, and the balance £1,655 carried forward.

THE YANGTSZE WHARF AND GODOWN Co., LIMITED.—The report for the year ending December 31st, shows a net profit of Tls. 50,466.24 making a credit in all to profit and loss of Tls. 63,400 85 including the amount brought forward from previous account. This amount was disposed of as follows:

Taels 63 400 85

THE CHINA TRADERS INSURANCE COM-PANY, LIMITED.—The following is the résumé of the board, submitted at the annual meeting held April 23rd, for the year ending December 31, 1907: The balance of working account on the 31st December, 1907, was \$1,157,832.00. The Board recommends that an interim dividend of \$3 per share be paid to shareholders, absorbing \$72,000, and that a bonus of 20 per cent be paid to contributors, absorbing about \$125,000, and that the remainder be carried forward.

THE KOOHIEN TRANSPORTATION AND Tow-BOAT Co., LIMITED.—At the annual meeting a dividend of 5% was declared after writing off Tls. 16,000 for depreciation and adding Tls. 5,000 to the marine insurance fund.

SEREMBAN RUBBER Co., LIMITED.—The profit on the year's working amounted to R 216,559.83 equal to 39.01% on the paid up capital. With the balance of R 3,112.32 brought forward from previous account the total credit to profit and loss was R 219,672,22. Out of this a final dividend of 15% was paid making in all for the year 33%, and a balance of R 1,522.22 carried forward.

BANGKOK DOCK COMPANY, LIMITED.—At an extraordinary general meeting the resolution passed at the meeting held March 16th providing that the capital of the company be increased to Ticals 1,000,000 was confirmed by the following resolutions:

That the present Share Capital of 4,000 shares of Ticals 166% each be converted into 8,000 Shares of Ticals 100 each by the transfer from Reserve Fund of Ticals 133.333.33; also that 2,000 additional Shares of Ticals 100 each be issued at a purchase price of Ticals 150 per share, thereby making the new Share Capital 10,000 Shares of Ticals 100 each. Further, that the additional Capital of 2,000 shares be called up as follows, viz:—10% on 1st July, 1908, 40% on 1st January, 1909, and the balance as may be required by the Directors, which will probably be 25% on 1st January, 1911.

The new issue of Shares shall be offered in the first instance to the present Share-holders pro rata, and in the event of any not being applied for, they shall then be offered to the Employees of the Company, after which any surplus shall be again offered to the Shareholders.

BANGKOK DOCK COMPANY, LIMITED.—A dividend of 12.5% was declared for the year with a bonus of 2.5%.

Hongkong Milling Company, Limited.—
An application filed in the Supreme Court of Hongkong asking for the winding up of the company was granted by the Chief Justice in Chambers and Mr. H. F. Chard, the assistant manager, was appointed official receiver.

THE TRANSPORT COMPANY "MOTOR".—This company which has been operating only since September last with its motor boats, at a meeting held March 31st, decided to increase its capital from Ticals 150,000 to Ticals 200 000. The net profit amounted to Ticals 16,156 30 out of which 7% was paid on the capital paid up.

HONGKONG ELECTRIC COMPANY, LIMIT-ED.—The directors submitted the following report at the annual meeting held May 2nd, for the year ending February 29th, 1908:

The balance at credit of profit and loss account is \$159,637.13; after deducting directors' fees (3,000) there remains a sum of \$156,637.13 available for appropriation, and your directors recommend that this be disposed of as follows:

To pay a dividend of 10 per cent:--Say \$1.00 per share on 60,000 shares \$ 60,000.00 To pay a bonus of 2 per cent:--Say 20 cents per share on 60,000 shares 12,000.00 To write off plant account for de-58,308.60 preciation To write off property account for depreciation 13,612.10 To pay a bonus to staff 3,395.00 To carry forward to next account. 9,321.43 \$156 637.13

SHANGHAI HORSE BAZAR COMPANY, LIMIT-ED.—The report for the half-year ending December 31st shows a balance to the credit of profit and loss of Tls. 15,429 68 which was carried forward. An interim dividend is anticipated during the next term.

JEBONG RUBBER COMPANY, LIMITED.—The credit to profit and loss account for the year ending December 31st, 1907, amounted to Rs. 126,228.94 after writing off 10% for depreciation. A final dividend of 4% making 7% for the year was authorized and Rs. 20,228.94 were carried forward.

NETHERLANDS INDIA DISCOUNT BANK.—
This institution will pay a dividend of 8% for the year ending December 31st, 1907, if the recommendations of the directors are confirmed. This institution has paid an average dividend of 7% for 50 years and 8% for the last six years. The directors have also recommended that the capital be increased to F. 12,000,000 to be fully paid up by December 31st, 1915. The annual meeting of the shareholders will be held at Batavia June 3rd.

East Asiatic Company.—This company has declared a dividend of 8% after paying kronen 250,000 into the reserve fund, an equal amount into the pension fund and leaving a balance to carry forward.

THE CHINESE ENGINEERING AND MINING COMPANY, LIMITED—This company has declared an interim dividend of 1s. 6d. a share free of tax for account of the year ending February 29th, 1908.

Meklong Railway Co., Limited.—The first annual report of this company which covers the period between July 12th, 1907, the date of the amalgamation of the Tachin and the former Meklong Railway companies, shows a net profit of Ticals 70,091.59. Out of this a dividend of 2.5%, absorbing Ticals 55,750, directors' fees and manager's bonus, Ticals 4.787.50, were paid and the balance of Ticals 9.554.09 was carried forward.

VICTORIA JUTE COMPANY, LIMITED.—The profit for the year ended December 31st amounted to £82,289. 5s. 5d. out of which interim dividends were paid in August last of 5% on preference shares and 4 on ordinary shares and a final dividend of 5% preference and 6% ordinary, making 10% for the year, was authorized.

GOLDEN HOPE RUBBER ESTATE, LIMITED.—
A dividend of 6% was declared last month for the year 1907 and the sum of £2,017 was carried forward.

NEW AMOY DOCK COMPANY, LIMITED.—
The report for the year ending December 31st, 1907, shows a profit of \$11,111.08 to which is added the balance of \$2,618 16 making a total of \$14,284.16 which was disposed of as follows:

Write off Amoy Dock \$1,885 92, write off plant and machinery \$1,416.73; commission to manager \$1,166.60, general managers and consulting committee \$600, transfer to repairs and renewals account \$4,000, dividend of 50 cents per share \$5,000, and carry forward \$1,214.91, making a total of \$14,284.16.

GREEN ISLAND CEMENT COMPANY, LIMIT-ED.—The following is the report for the year ended Dec. 31, 1907, submitted at the annual

meeting held April 25th:

The net profit, after providing for depreciation on buildings and machinery, launches, lighters, etc., and including the amount brought forward from the previous year, amounts to \$406,078 16 disposed of as follows:

—To place to Reserve Fund, \$1,000.00; To pay a final dividend of 75 cents per share on 400,000 shares, \$300,000.00; Add. Interim dividend of 50 cents on 200,000 shares, \$100,000.00; To carry forward to the credit of next year's account, \$5.078 16; the capital of the Company was increased by special resolution in March last to \$4,000,000.

Consulting Committee.—The Hon. W. J. Gresson having left the Colony, the Hon. H. Keswick was invited to take his place on the Consulting Committee. In accordance with the Articles of Association, Sir Paul Chater, C. M. G., the Hon. H. Keswick and Dr. J. W. Noble retire, but being eligible

offer themselves for re-election.

GERMAN AUSTRALIAN STEAMSHIP COM-PANY.—The dividend declared by this Company was 8% for the year 1907. The gross receipts for the year were Marks 3,519,909 against 3,307,707 for 1906.

SELINGSING RUBBER COMPANY, LIMITED.—
The balance to the credit of profit and loss for the six months ending December 31st, 1907, after charging the usual expenses and writing off preliminary expenses was R. 1,111.15 which was carried forward to next account.

LUZON SUGAR REFINING COMPANY, LIMIT-ED.—The result of the year's operations was a profit of \$3,390.46 which reduces the debit to profit and loss account to \$135.132.55. There was little demand for the product of the refinery during the year 1907, but the directors believe that the prospect for 1908 is much brighter.

Mysore Gold Company, Limited.—A dividend of five shillings per 10 shilling share was declared by this company for the four months ended December 31st, 1907.

DUNNING & Co., LIMITED.—Out of the sum of \$15,123.90 to the credit of profit and loss account for the year ended February 29th, a dividend of \$5.00 a share, equal to 10%, was paid; \$5,000 placed to the credit of good will and \$123.90 carried forward.

CEYLON ICE AND COLD STORAGE Co., LIMIT-ED.—This Company has declared a dividend of 7.5% for the year.

PATALING RUBBER ESTATES SYNDICATE, LIMITED.—This company has declared a final dividend of 25%, which, with the interim paid in October of 10%, makes 35% for the year ending December 31st, 1907.

DELI TOBACCO COMPANY, LIMITED.—After carrying fl. 70 000 to the reserve fund, making it fl. 174,266, a dividend of fl. 500 a share or 50% for the year was declared.

CENTRAL STORES, LIMITED.—The report for the year showed a credit balance of \$46,-

252.02 and after paying fees, writing off depreciation, bad accounts, etc., a balance of \$17,852.02 was carried forward.

Toyo Kishn Kaisha.—The net profit for the half year was yen 203,084 459, which with yen 5,562.650 brought forward from previous term and yen 100,000 000 brought from reserve fund for equalization of dividend made yen 308,647.119 available. Out of this amount a 12% per annum dividend was paid absorbing yen 289,900.000; yen 10,200.000 to reserve and yen 8,547.119 carried forward.

CHINA LAND AND FINANCE COMPANY, LIMITED.—The credit balance for the year ended February 29th, 1908, was Tls. 49,058.37, out of which a dividend of 10% absorbing Tls. 34.925.00 was paid; Tls. 11,000.00 written off good will and the balance of Tls. 3143.37 carried forward to new account.

ANGLO FRENCH LAND INVESTMENT COM-PANY, LIMITED.—The report of the directors for the year showed a balance of Tls. 136,-531.43 inclusive of Tls. 3,288.14 brought forward from previous account. This amount was distributed as follows:

Dividend of Tls. 6 per share....... 120,700.00 Depreciation and Renewals Ac-

Tls. 136,531.43

THE HONGKONG ROPE MANUFACTURING COMPANY, LIMITED.—At the annual meeting of this company, a final dividend of \$1.20, making \$2 in all for the year 1907, was declared.

SANDYCROFT RUBBER Co.—The amount to the credit of profit and loss at the end of the year, January 31, 1908, was \$16,561.77, out of which it is proposed to pay a dividend of 15%; transfer \$500 to employees bonus account and to carry forward \$1,211.77.

MINING NEWS

F. M. S.

The output of the Kuantan Tin Mining Co.'s Mines for March follows:

Kuantan	64.50
Yip Chin	72.00
Un Chong	88.50

225.00 Piculs

Belat Tin Mining Co,'s March Output:

Belat	150.50	Piculs.
Tam Kim	150.00	
Wong Kow	81.75	
Ah See	28.50	
Sulai	21 75	
Ah Koon		
Low Siong	6.00	
Sungei Langsat	3.75	

Total...... 471.75 Piculs.

The following outputs for March are reported:-

Bruseh Hydraulic	460 Piculs.
Societé des Etains de Kinta	2,373
Tronoh	2,701
Lahat	264
Mendrus	2141/2
N. Tronoh	3401/2

The total of Tin Ore exported by the tributors on the lands of The Royal Johore Tin Mining Coy. Ltd. during the month of March, was Piculs 180.

MARCH OUTPUTS.—Pusing Lama 415 pikuls value \$16,550.

Kledang 325 piculs. Chenderiang group 1,047 piculs.

Selangor tin returns January to March show the following in pikuls.-

Block tin 8,388.23 22,848.18 — 14,459 95 Tin ore 67,597.68 41,596.58 26,001.58 Duty \$628,150.19 \$860,153.07 —\$232,002.88

Kanaboi	122	pkls
Kinta Tin Mines Ltd	C 24	"
Gopeng Tin Mining Co., Ltd	550	
New Gopeng Ltd	210	
Redhills Tin Mining Co	360	17
Tambun Mine	1,700	

PERAK TIN EXPORT.—The following are the "advance figures" of the export of tin from Perak for March, 1908:—

GOLD OUTPUT

Raub Austrailian Gold Mining Company's output for the four weeks ending March 28 follows:

Bukit Koman. Stone crushed 3,862 tons, Gold obtained 922 ozs., Average per ton 4.77 dwt.

Bukit Malacca, Stone crushed 1,959 tons, Gold obtained 157 ozs., Average per ton 1.60 dwt.

PHILIPPINE ISLANDS

The Benguet Consolidated Mining Co.'s output for the six weeks ended April 20 was 358 ounces. The Paracale Gold Dredging Company reports 173 ounces for the three weeks ending April 22.

LUMBER SHIPMENTS

The following announcements of lumber shipments from the Pacific coast to the Orient are published in the *Timberman*, an enterprising trade paper published in Portland, Oregon, for March:

The British steamer Taunton will load lumber on Puget Sound for Australia during

the month.

The American steamship Shawmut will sail early in April for Japan, China and Manila, with a lumber cargo, from Tacoma.

Mukilteo Lumber Company, Mukilteo, Wash., will ship about three and one half million feet of lumber to Japan early next month.

The British steamer Inverkip has been chartered by Bowling & Co., to load mining timbers for Port Pirie, Australia. The Inverkip will carry about 3,200,000 feet.

The new steam schooner Capastrano received her first cargo this month at the mill of the Portland Lumber Company, Portland.

The Norwegian steamship Tungus cleared from Portland February 27 with 761,000 feet of lumber for Hongkong. The North Pacific Lumber Co. furnished the cargo.

The Norwegian steamship Sommerstad will carry a cargo of lumber to Shanghai for the Oregon Pine Export Lumber Company, sailing about the middle of the month of March.

The Reliance Lumber Company, of Tacoma, will ship about 350,000 feet of lumber to Yokohama, Hamburg and London, on the ship Ningchow, which will clear March 18. This company will also furnish part of the cargo for the British ship Hilston, which will clear for Rotterdam early in April, and the entire cargo for the British bark British Yeoman, which will leave for Sydney, Australia, the latter part of April.

INSULAR LUMBER CO.

One million feet of lumber from the Insular Lumber Co.'s mills in Negros has arrived at Manila and is offered at lower prices here than the market price of Oregon pine. This promises to revolutionize the Philippine Lumber trade. Mr. Chas. S. Derham, the manager, states that the company is equipped to furnish the product in any quantity to the trade.

EAST BATAN COAL MINES

The announcement is made by Mr. A. M. Betts, manager of the Company, that over 80,000 tons of coal have been blocked out and a thirty HP engine is being installed to supply power for the cable which carries the product to the wharf from the interior of the mines. The output daily, heretofore, has been about 60 tons but this will be greatly increased with the installation of the machinery now under way.

FAR EASTERN ENGINEERING, CONSTRUCTION, COMMERCIAL AND FINANCIAL NEWS

ELECTRIC RAILWAYS, LIGHTING, POWER, TELEGRAPH LINES, ETC.

INTERNATIONAL WIRELESS UNION.—Japan has signified her intention to join the union and the agreement will go into effect July 1st.

BATAVIA-Cocos Cable.—The opening of this line last month has not only provided an alternate route to Europe and Australia but gives a more direct route to Africa.

TAIREN ELECTRIC RAILWAY.—The Manchurian Railway Co. has made application for a franchise to install an electric system in the city of Tairen to cost approximately Yen 1,000,000.

ELECTRIC LIGHTS FOR NANTAO.—This suburb of Shanghai was recently lighted to the extent of several streets by the Chinese Electrical Co. of Nantao and will be extended from time to time.

Pinang Tramway.—The profits for the year were \$20,834.83, which paid all the interest on the capital and left a balance of \$5,066,36. On the first year 1906 there was a deficit of \$3,486.90.

Penang Electric Supply Department.—The report for the year shows a profit of \$19,384.38 or about 4.5%. The expenditure was higher than in former years owing to 14% increase in the cost of coal.

Wireless at Woosung.—By direction of Viceroy Tuan Fang the director of Nanking telegraph station will select a site for a wireless station at that point and to provide accommodation for the staff.

Mongolia Motor Car Service,—A company is being formed for the purpose of establishing communication between the more important towns in Mongolia and to carry the Imperial mails.

Nikko-Ashio Electric Railway.—A company has been formed with a capital of yen 200,000 and permission has been secured to construct an electric line connecting these two points. The distance is 7 miles.

Canton Telephone Company.—The service at Canton costs \$40 per annum and the report for the year shows about 1500 susbcribers. An effort is being made to secure long distance connections with Hongkong.

Installations on Empress Liners.—The contract for the installation of 500 light direct coupled steam engines and dynamo sets complete with switchboards on the Empress steamers has been placed with Messrs. Wilks & Jack's of Hongkong.

Motor Watering Carts.—The motor watering cart has been used with success in Singapore by the municipality and is found to be more economical than the use of bullocks or horses as well as more efficient. Pinang is also considering their introduction.

Hakone Electric Co.—Some business men of Yokohama and Tokyo intend to erect a power station at Hakone with a view to supplying electric light in Yokohama. The promoters have applied to the Kanagawa prefectural government for a charter.

Wireless for Chinese Army.—Two wireless outfits ordered by the Chinese provincial government through Messrs. Carlowitz & Co. have arrived at Nanking and are being installed. The system has a capacity of sending messages a distance of 250 li.

NEW ZEALAND ELECTRIC RAILWAYS.—Plans are being discussed for the construction of an electric line connecting Lower Hutt and Petone with the railway to Wellington and to provide electric lighting for the district at a cost in all of about £20,000.

Trans-Russian Wireless Service.—Apparatus has been ordered by the Russian government for the establishment of a wireless service between St. Petersburg and Vladivostok. Stations will be established for relay on the Ural and the Atlas mountains.

Tokyo Electric Light Co.—The new water power generating plant of this company was put in operation March 27 for the first time and an announcement of a reduction of rates to that charged by the Tokio Railway Co. for the same service went into effect April 1st.

Sobu Electric Railway.—This company which has a capital of yen 3,500,000 has applied to the government of the Kanagawa prefecture for a charter to construct and operate a line between Shubuyo in Tokio and Matsuda on the Tokaido line, a distance of 65 miles.

Keihin Electric Railway.—This company is endeavoring to raise a loan for the purpose of reconstructing the bridge across the Rokugo-gawa at a cost of yen 500,000; to increase the capacity of its generating plant at a cost of yen 200,000 and to extend its line so as to connect with the Tokyo tramways.

Takisaki-Hiratsuka Electric Railway.—The construction of this line with a view to covering the distance between these two important centers, 83 miles, in less than two hours is believed to have been arranged for. It is understood that the company has been formed with a capital of 7,500,000 subscribed by an English syndicate for the purpose.

ELECTRICAL INSTALLATIONS.—Messrs. Wilks and Jack's of Hongkong have secured the contract for the installation of complete electric light systems including searchlights, etc., in the two new Chinese gunboats

being built at Hongkong. This firm has also secured the contract for the installation of a suction gas plant and electric wiring for eight elevators in Messrs. Butterfield & Swire's godowns at Kowloon.

NANKING ELECTRIC TRAMWAY.—Viceroy Tuan Fang is interesting himself in the installation of an electric railway in the city of Nanking which will cost when completed about Tls. 200,000 and will cover about 14 miles of streets. The line will connect Hsiakuan with the native city through Chincipuan City gate and will be extended to meet the increased demands upon it. The China Critic states that the scheme has been approved by the Empress Dowager.

Sydney Power House.—The opening of the extensions of the Sydney electric railway system to traffic will be delayed until the arrival of the two new turbine generators, the delivery of which has been delayed until June. When they are installed the capacity of the plant will be 23,400 horse power. The Australian Hardware Journal is of the opinion that in a few years it will be necessary to build another power house to keep pace with the rapid expansion of the system.

The Anglo-Japanese Water Power Electricity Co.—The capital of this company has been fixed at yen 10,000,000, one-half of which is paid up, and will proceed at once to develop 32,000 horse power from the Oigawa as the first step in carrying out its gigantic scheme to develop about 140,000 horse power from the same source. Three engineers are now busy making the preliminary survey and over 20,000 horse power has already been contracted for by the Tokyo Railway Co. and manufacturers at Tokyo.

RAILWAYS AND RAILWAY SUPPLIES

YOKOHAMA RAILWAY.—The Kanagawa-Hachoji section of the Yokohama Railway will be opened for traffic June 1st.

NANAO RAILWAY PURCHASE.—The price of the line which was taken over last October has been fixed at yen 1,491,355.

Kiangsu Railway.—The announcement is made that the line is open for traffic as far as Sungkiang. Temporary depots have been provided.

Tokaido Railway.—The completion of the construction of the second line between Fukuroi and Nakadzumi and between Miyashiro and Kariya has been announced.

THAWE-TIWARIPATTI RAILWAY SURVEY.—The railway board of India has authorized the survey covering a distance of 24 miles connecting Tiwarpatti with the North-western Railway system.

Japanese Railway Purchases.—The price of the Nippon Railway which is to be taken over by the government has been fixed at Yen 142,523,600, and that of the Kyushu road at yen 118,856,447.

Heilungkiang Railway.—It has been decided to construct the section of this proposed road between Ngaun-Chi and the capital of Heilungkiang first. The survey has been completed for some time.

THE JOHORE STATE RAILWAY.—The total appropriation for this railway for 1908 amounts to \$2,727,393, or approximately the same amount as the year previous and making in all for the road to date about \$5,000,000.

Tientsin-Pukow Railway.—The site for the railway station at Sinchwang has been selected and the land secured. Latest advices from Tientsin are to the effect that the construction of the line will begin early in the fall.

Hongkong-Canton Railway.—The Peking authorities have indicated that they desire to work conjointly with the British authorities so that there will be no unnecessary delay in the construction of the Chinese section of the road.

TRANS-FORMOSAN RAILWAY.—On May 1st, the entire line across the island was open to traffic. This system of railways is a compliment to the energy of the Japanese and will prove the greatest factor in opening up the country for development.

Manchurian Broad Gauge.—The authorities decided last month to postpone the opening of any section of the broad gauge until May 20th, when it will be possible to proceed through to Kwangchentz instead of to Mukden, had they carried their original plans.

The E5,000,000 loan at 5% has been oversubscribed at 98.75 in London and Germany. It is understood that the head office will be located at Peking and that orders have been placed with Japanese contractors for sleepers and coal.

SEOUL-FUSAN RAILWAY.—The Japanese government will hand over the bonds covering the purchase price of this line to the shareholders, June 1st. Certificates will be honored by the Bank of Japan and each share of yen 30 paid up will entitle th holder to yen 39.30 worth of bonds.

Kirin-Chanchun Railway,—An estimate of yen 90,000 a mile for cost of construction is contained in the report of the engineers who have concluded the preliminary survey. The length of the road is 30 miles and it is expected that it will be opened for traffic by the spring of 1910.

Sanning Railway.—The section covering a distance of 40 miles between Kung Yip and Sam Hap is expected to be completed by the end of the year and it is the purpose of the company to extend the line to Kong Moon and Fat Shan to join the Yuet Han line as soon as funds are available.

Indo-China Railways.—A recent report of the development of the railway system by the French in carrying out the scheme prepared in 1899 shows 903 kilometers completed out of the entire 1,500 kilometers proposed. The entire expense of completing the scheme will reach the vicinity of frances 275,000,000.

To Connect Tokio and Wiju.—With the completion of the reconstruction of the Seoul-Wiju Railway this month, and the increase of steamers plying between Shimonoseki and Fusan, direct connection covering a distance of 1,400 miles will be established. The distance between Fusan and Wiju is 600 miles.

Belgian Syndicate Interests.—The Syndicate has submitted a communication through the Belgian minister at Peking to the authorities asking for permission to extend the Chengting-Taiyuanfu line to Hsianfu, Shansi, and to construct a number of branches tapping the several coal deposits in that section. The request is based upon promises claimed to have been made by Sheng Kung-pao in 1904.

Tai-Tsao Railroad.—The survey of this line, which when completed will be 90 li in length, is well under way and most of the right of way secured. The line will very probably be made a branch of the main line of the Tientsin-Pukord and does not extend beyond the borders of Yi county, Shantung. The entire cost of construction is being borne by the coal mines North of Yihsien and the transportation of coal will be the principal purpose of the road.

Japanese Railways.—The rolling stock of the Japanese government system is not sufficient to meet the increased business of the different lines. The bureau has about 2,000 locomotives, an increase of over 40% compared with last year, but this increased capacity is not keeping pace with the 16% increase of freight. Arrangements have been made to secure 200 locomotives belonging to the South Manchurian Railway and 60 additional engines have been ordered abroad

Peking-Hankow Railway.—The redemption of the famous Peking-Hankow Railway from the Belgian Syndicate is now the subject of negotiations on the part of the Peking authorities. The loan which amounts to about 112,500,000 francs may be undertaken by the Chinese who desire to control the road. The Chinese government has the right to redeem the road after October 1907 and before 1930. According to the best information a Chinese company is to be formed; a second Belgian loan floated to redeem the first loan and the road be given as security. It is the purpose of the Chinese to control the road.

South Manchuria Railway.—It has been announced that the head office of this company will be transferred from Tokio to Dalny and the office at Tokio will be maintained as a branch office. The Dalny Ryoto Shimpo states that the company intends to expend yen 100,-000,000 as follows:

For broadening the gauge for the whole length of the railway, 20,000,000; for improving the harbor of Dalny, 5,000,000; for double tracking the railway from Dalny to Sojatung (the first station south of Mukden), 10,600,000; for capitalizing the Fushun and Yantai coal mines, 4,000,000; for buying land and erecting godowns, 8,000,000, for capitalizing the marine transportation service, 10,000,000; for improving the railway between Antung and Mukden, 22,000,000; and for a reserve fund, 11,-400,000.

PUBLIC AND PORT WORKS, DOCKS, WHARVES, ETC.

CHEMULPO WATERWORKS.—The finance department has made an appropriation of yen 60,000 for the construction of a new water supply system at Chemulpo.

Newcastle, N. S. W., Harbor Improvement.—The construction of 1200 feet of new wharfage in the basin is now under way and another year will probably see the beginning of the work on the inner basin.

SIBERIAN WATERWAY IMPROVEMENTS.—Surveys of the rivers along the route of the Siberian Railway are being made with a view to constructing a waterway as nearly paralell with the line as possible. Canals will be built where it is necessary to connect the rivers and reduce the distance.

Kanagawa-Shinagawa Canal.—A scheme is on foot among the businessmen of Yokohama to construct a canal connecting those two points, says the Yokohama Chamber of Commerce Journal. This canal will be 20 miles in length and would facilitate the transportation of merchandise to and from Yokohama.

Hankow Reclamation Work.—At a recent meeting of the Chinese Chamber of Commerce Tls. 900,000 were subscribed as nucleus of a fund for the reclamation of the waste land adjoining the foreign settlements. The sum of Tls. 4,000,000 will be necessary, it is estimated, to carry out the plans under consideration.

Whangpoo Conservancy.—The Dutch East Asiatic Dredging Co. in charge of this work has two additional dredgers on the way out from Europe, which upon their arrival will increase the number in operation to five. One of those on the way is a suction dredger and is making her passage under her own steam.

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TAIREN HARBOR IMPROVEMENTS.—The expenditure of yen 10,000,000 during the next five years in this work by the Japanese authorities has been decided upon. When the plans for the improvements have been carried out the capacity of the port will be increased to over 1,000,000 tons annually or double the present volume.

Chinese Naval Station.—The selection of Mendusa Creek Harbor off Nimrod Sound on the coast of Chekiang, South of Ningpo, is being considered. It affords a protected anchorage three miles in length and offering an average of six fathoms at low tide. A survey of these waters has been made and the report is very favorable.

NEW HARBOR AT OMUDA.—The first stage of the work on this project under the direction of the Mitsui company was completed last month and the tide was admitted. When completed this work will cost about yen 4,000,000 and provide for direct shipment of coal from the Mike mine instead of having to take cargo by way of Kuchinotsu.

FORMOSAN PUBLIC WORKS.—The plans of the Formosan government include the expenditure of yen 30,000,000 in the establishment of an irrigation system to cover a period of 15 years; the improvement of Takow harbor at an expenditure of yen 4,733,000 to be completed in six years and yen 4,000,000 for the completion of the Taitong railway by the end of 1915.

HAIPHONG HARBOR IMPROVEMENTS.—Extensive operations are under way at the chief port of Tonkin in the way of dredging and reclamation with a view to making the harbor available to the largest commercial liners and in view of the importance of that point as a railway terminus. The Siam Free Press states that in addition it is the purpose of the authorities to establish a graving dock there.

Pinang Waterworks.—At a recent meeting of the municipal commission, the city engineer reported progress on the waterworks and was authorized to engage an assistant to aid in this special work which involved the construction of the balancing reservoir, settling tanks and the redistribution of the water mains. This work will take between two to three years to complete and will cost over a million.

Dredging the Grand Canal.—The expenditure of Tls. 250,000 by the provinces of Kiangsu and Shantung for the dredging of the canal for a distance of 650 Li has been authorized by the authorities at Peking, and work will commence at once. According to the China Critic, this work will extend from Chingkiangpo to Techow and when completed will facilitate the operations of steamers from Tientsin via Techow to Northern Kiangsu and promote the better transportation of mails.

Auckland Sewerage Scheme.—Plans for a comprehensive sewer system for the city of Auckland, N. Z., to cost in the vicinity of £450,000 and to provide for a population of 250,000 or about three times the present population have been completed. The scheme provides for a main outfall sewer to discharge the sewage into the sea at Okahu Point. Reinforced concrete tanks are recommended according to the Australian Ilardware Journal for the reason that concrete is the cheapest material available.

Tasmania's Water Supply.—The annual report of the chief health officer of Tasmania contains the interesting information that in the dry regions of Southern Tasmania the rainfall is carefully collected and guarded from infection by means of areas sufficiently large to meet the requirements, covered with galvanized iron in a sloping position which catch the rain and feed the tanks provided for its reception. Each inch of rainfall on a surface of one square yard provides 3.75 gallons of water after allowing for evaporation.

IRRIGATION IN MYSORE.—The Mysore government has drafted a scheme which will involve the expenditure of £1,000,000 and when completed will provide sufficient water for the irrigation of the greater part of the state and have some to spare for the city of Madras. The scheme involves the construction of a reservoir at Seringgapatam with a capacity of twenty billion cubic feet of water. In view of the success of the Cauvery Power Scheme, the *Indian Textile Journal* believes that this project presents no financial obstacles to the Mysore government.

Hongkong Naval Yard.—The British Naval estimates for 1908 as regards Hongkong are referred to in an explanatory note by the First Lord of the Admiralty under the head of New Works to the effect that the contract for the erection of the new storehouse has been let and work on foundations progressing. Contracts have been let for the steel work of the electrical shops and the work of erection is under way. The new torpedo range is announced as practically finished. It is also announced that the whole of the dockyard extension work is expected to be completed during the fiscal year 1908-09.

Yokohama Reclamation.—After two years' work, most of the reclamation is complete, the piers for ships' berths are established; a customs warehouse built and the foundation for the reconstruction of the damaged breakwater laid. In all it was proposed to spend yen 9,954,000. Of this the sum of yen 2,453,000 was expended last year and approximately yen 1,000,000 will be spent this year. Several cranes are to be installed and part of the railway connecting the harbor with the depots in the city will be built this year. Present estimates place the date of the completion of the work about 1912, says the Japan Mail.

Liao River Bridge.—The recent heavy floods greatly endangered the new steel bridge in the course of erection between Kaopantzu and Hsinmintun on the line of the Imperial Railways of North China to replace the temporary wooden structure at that point and it was saved only by the vigilance of the engineers in charge. This bridge when completed will be 2,000 feet in length with spans of 100 feet, each. It rests on concrete pillars built on the rock foundation of the river bed.

The caissons on the Eastern side had to be sunk to a depth of 60 and 70 feet. The Shanhaikwan correspondent of the Peking and Tientsin Times states that Resident Engineer Leitch, who is in charge of construction expects to finish the bridge by the end of the present year.

Madras Harbor Improvement.—The purpose of the harbor board is to deepen the greater part of the harbor to 30 feet at low water and to extend the facilities at an outlay of 1,500,000 rupees in the following works:

Reveting and raiding the whole of the remainine foreshore, rupees 172,000; permanent way to complete the equipment of the port, rupees 75,000; remaining hydraulic equipment of all sorts, rupees 382,000; shed for nonsuitable imports rupees 213,000; pier for nonsuitable imports, rupees 118,000; pier for bar iron laudings, rupees 102,000; coal arrangements on the North arm for wagon loading, rupees 51,000; pier for beach-stored coal, rupees 152,000; ship wharves on the South arm, rupees 110,000; second pier for dutiable imports, rupees 125,000.

Hongkong Typhoon Shelter.—The expenditure of \$70,000 for deepening the area and increasing the accommodation of the Causeway Bay Shelter has been authorized as a temporary measure pending the construction of a breakwater at Mongkoktsui to enclose 66 acres, recommended constructed by the public works committee. The secretary of state for the colonies has been asked to defray half the expense and the Governor has proposed a temporary increase of Light Dues on ocean going steamers to 2.5 cents a ton and river steamers to .83 cents a ton for each entry by day or by night and that this provision be inforced until the amount of increased dues collected shall amount to one-half of the cost of the entire work. The subject matter was submitted to the committee of the Hongkong Chamber of Commerce and discussed by that body. According to the Hongkong Telegraph the members of the committee were of the opinion that the amount proposed expended was excessive.

SHIPBUILDING, GENERAL MARINE AND FISHERIES

KOREAN PORT OPENED.—The port of Chungchin, Puryong-kun, was opened to foreign trade April 1st.

Canton Fishing Company,—This organization which is engaged in extensive deep sea fishing intends to extend its operations to Swatow.

Rapid Transit.—The steamship Minnesota made her last voyage across the Pacific in two days less than her schedule and carried a shipment of silk on a record of 20 days to New York.

Side Wheel Ferry Boats for Canton-Hankow Railway.—Bids have been invited for the construction of two vessels, each capable of accommodating from 1,600 to 2,000 passengers.

FLOATING FISH HATCHERY.—The Australian government is considering the advisability of establishing a floating hatchery for the breeding of fish so that it may be towed from place to place.

U. S. Launch Wheeler Delivered.—The third steam launch ordered by the U. S. Quartermaster's Department and constructed by the Hongkong Whampoa Dock Co. has been delivered.

British Trawler for Japan.—The first British trawler sold to the Japanese sailed under its own steam from Swansea docks the latter part of February and is due at Nagasaki the latter part of May.

SHANGHAI-TARIEN LINE.—The Osaka Shosen Kaisha and the Japan-China are arranging for the establishment of a service between these two points and expect eventually to include Hongkong, Canton and Swatow as ports of call.

MARINE STEAM TURBINE.—The new U. S. scout cruiser Chester recently launched is equipped with the Parsons marine steam turbine and on its trial trip made 26.52 knots or 2.5 knots over contract speed. This is the fastest vessel in the U. S. Navy.

Osaka Shosen Kaisha.—This company has ordered five steamers of from 2,500 to 3,000 tons each for the Korean coasting service, one of which will be completed shortly. The company is now considering the construction of six new steamers of 6,000 tons each and of specially high speed.

JAPANESE DISPATCH BOAT MOGAMI.—This warship, the first built at Nagasaki, was successfully launched last month. Her dimensions are as follows:

Length, 300 ft.; breadth 31 ft. 6 inches; depth 18 ft.;

displacement, 1,550 tons.; actual horse power, 8,000; engine, Parson's triple steam turbine.

CHINESE STEAMSHIP Co.—Bids for the construction of a dozen river steamers suitable for transportation purposes on the Usuri, Heilung and Sungari rivers in Manchuria have been invited. The necessary funds for financiering this enterprise will be raised from customs revenue collected in Northern Manchuria.

Formosan Steamship Subsidy.—The Formosan government has authorized a subsidy of yen 800,000 to the Osaka Shosen Kaisha and the Nippon Yusen Kaisha for the current year. Of this amount yen 80,000 is provided for the Sakura Maru, one of the volunteer fleet which will begin its service next December and agrees to make three trips between Formosa and Japan every month as a passenger boat.

NEW BANGKOK STEAMSHIP Co.—The capital of this company has been oversubscribed and it is not improbable that the promoters will decide to increase the capital to meet the wishes of the applicants. Six steamers will be chartered, and in the meantime tenders will be invited for new ships. This company will extend its operations from the proposed line to Singapore to include Hongkong and China ports.

Nippon Yusen Kaisha.—The Chamber of Commerce Journal of Yokohama in reviewing the Japanese merchant marine states that since April, 1906, the N. Y. K. has increased its fleet by 80 newly constructed vessels representing a tonnage of 269,727, besides the addition of 11 chartered steamers with a tonnage of 45,146. This shows an increase from 75 vessels, tonnage 253,935 in 1906, to 169 vessels, tonnage 566,808, in March 1908. This will be increased in a short time to 618,000 tons.

Extension of Chinese Merchant Marine.—The report by the deputies of the various districts of North China on the most feasible method of extending the facilities for navigation and water transportation has been received by the Board of Posts and Communications and among the recommendations made it is proposed to raise Tls. 20,000,000 through the National Communications Bank to inaugurate and operate the following lines:

One connecting Shanghai and the Pacific slope via Japan; a line from Chefoo to Japan; a line from Port Arthur to Japan via Yankow and a line connecting Amoy, Penang, Manila and Formosa. The last two lines will probably be inaugurated first.

MINES, MINERALS, AND THE METAL TRADE

GOLD IN JAVA.—In the province of Malany, a remarkable discovery of rich gold quartz is reported.

Shantung Mining Co. Increases Capital.—Advices from Berlin announce the increase of the capital of this company by 1,500,000 marks.

RANGOON OIL Co.—The shareholders of this company held an extraordinary meeting April 4th for the purpose of increasing the capital to thirteen lakhs.

Banyumas Mineral Springs.—A company with a capital of 50,000 guilders has been formed to develop the recently discovered springs in Java. The plant will soon be opened.

Lode Mine Purchase.—Mr. J. M. Wilson, the owner of the mining property adjacent to the Chendai, is reported to have sold out to a large Penang syndicate, says the Times of Malaya.

BURMA OIL COMPANY CONSTRUCTION.—The construction of the pipe line from the Yenangyat and Yenangyaung oil fields to Rangoon is well under way. The fields referred to are situated in Upper Burma.

AKITA MINING SCHOOL.—The sum of yen 350,000 has been made up by contributions from the leading mining companies in Japan for the establishment of a school of mines and over 60 pupils have already been enrolled.

Chilarino Gold Mine.—Discouraging reports have been received at Peking from the viceroy to the effect that the initial development work at this mine had failed in results. An investigation has been ordered.

The Iwaki Colliery.—This company which suffered severely from the floods last year is again running at full capacity and is turning out 60,000 tons a month. The new headquarters at Kyobashi have been completed.

ANGLO-JAPANESE STEEL WORKS.—The loan contract by which Messrs. Armstrong & Co. and the Vickers-Maxim Co. have agreed to advance yen 10,000,000 to this company organized at Hokaido, has been signed. The rate of interest is 6%.

KUANTAN MINING DISTRICT.—An inspector of mines will be stationed in this district in view of the development of the deposits there and according to the Malay Mail, Mr. Mungo Park, a well known mining engineer has been selected for the position.

Borneo Coal.—The announcement is made by the Cowie Harbor Coal Co. that the railway to the Silimpopan mines will be finished and in first class order by July when the company's lighters will be loaded directly from the mines. The output at present is about 65 tons a day and increasing.

Kinta Association Development.—It is expected, says the *Perak Pioneer*, that the hydraulic machinery will be in working order within six months on the Tanjong Ara Mine, Tanjong Rambutan. The excavation is twenty feet in depth over a surface of 170 feet square.

OIL GUSHER IN FORMOSA.—At Byoritsu, North Formosa, the South and North Oil Co. struck a remarkable gusher at 918 feet which threw a column of oil about 24 feet high. According to the correspondent of the South China Morning Post, the quality of the oil is of the best.

STANDARD OIL INSTALLATIONS.—This company has let the contract to Messrs. W. S. Bailey & Co. of Hongkong for the erection of an additional steel tank at Laichikok. This firm installed the former tanks at this point as well as at Haiphong and Saigon for the same company.

Manchuria Mining Bureaus.—The viceroy is greatly interested in the development of the mineral deposits of Manchuria and has established offices at Mukden, Kirin, and Tsitsihar for the purpose of investigating and exploring the mineral zones, especially in the Three Eastern Provinces. The China Critic states that an effort will be made to develop the deposits with Chinese funds.

Shantung Mining.—The provisions of the Tientsin-Pukow Railway loan agreement have been interpreted at Peking to provide for the exclusion of foreign capital in the development of the mineral deposits found along the route of the line. German capital has been discouraged by the authorities and the announcement is made that these deposits will be opened up by Chinese capital.

FINANCIAL AND MISCELLANEOUS

YOKOHAMA ICE STORAGE Co.—This organization has decided to open a branch factory at Negishi.

Sandakan Ice Co.—This company recently began operations and fixed the price of ice at three cents a pound for the present.

CANTON PAPER FACTORY.—It is proposed to reduce the export tax on manufactured paper in order to encourage this industry.

University at Hanoi.—A movement is on foot in France to establish a university at Hanoi for the benefit of the Chinese.

JAPANESE SILK FAILURES.—The Noguchi silk firm of Kyoto with a capital of yen 200,000 has failed and the Japan Mail predicts a number of failures along the same line.

Rubber Exhibition.—The Netherlands Government has appointed a commission to represent the colonies at the London Exhibition and a large display of the product will be made.

Large Flour Order.—The Russian government placed an order with the Portland Flour Mills Co. for 50,000 barrels of flour to be delivered at Vladivostok. The first shipment was made March 15.

FORMOSAN CAMPHOR MONOPOLY.—The Financial Office took over the Camphor Monopoly last month, the contract giving control of this business to Messrs. Samuel, Samuel & Co. having expired March 31st.

JAPAN-CHINA COTTON MILLING Co.—This company's new factory having a capacity of 5,000 spindles is complete and will commence operations this month. The motor power is to be provided by a Curtis steam turbine.

Japanese Cotton Spinners' Union.—The proposition of the Japanese Cotton Yarn Guild of Shanghai made to the Union to reduce the output by one-half will be discussed at a meeting of the spinners at Osaka this month.

ILI CRAPE FACTORY.—The necessary capital for the establishment of the proposed crape factory at Ili has been subscribed by the businessmen of Peking and Tientsin and Tls. 200,000 have been paid in. The capital of the company is Tls. 500,000.

INDO CHINA BUDGET.—The following sums have been approved:

General budget of Indo-China, \$32,805,000; local budget of Tonking, \$5,893,000; Annam, \$2,915,000; Cambodia \$2,582,000; Laos. \$1,018,000.

Japanese Sugar Trust.—The combination of the three sugar refining companies of Japan is reported to be under way and announces its purpose to control the production and eliminate competition. The claim is made that the present production of five million piculs is 600,000 piculs over the demand.

Formosan Sugar Yield.—It is estimated that the crop this season will not yield over 1,000,000 piculs. The correspondent of the South China Morning Post writes that in addition to the several mills being installed, one with a capacity of from 100 to 150 tons will shortly be installed in Gilan province.

Indian Sugar and Cotton.—Official forecasts of the Commercial Intelligence Department place the yield of unrefined sugarcane sugar for the year at 1,897,000 tons, a decrease of 14% compared with last year while the forecast for cotton yield places the estimate at 3,056,000 bales against 4,945,700 last year.

Sumatra Lumbering Industry.—The Netherlands government will introduce the use of steam winches and cables for snaking the teak logs out of the forest to the main roads or railways. This decision is based on the report of H. J. Herbert, expert, who investigated the methods employed by the lumbermen of the Philippines.

Japan's Foreign Trape.—The total for 1907 was yen 926,880,219 of which amount commerce with America is represented by Yen 211,000,000, Great Britain, Yen 138,000,000; Asia, Yen 391,800,000. The total imports were Yen 494,467,346 and the exports yen 432,412,873. The increase in foreign trade for the year compared with the preceding term was Yen 84,340,981, or about 10%.

NATIONAL BANK OF CHINA,—The increased capital to make up Tls. 10,000,000 is reported to have been fully subscribed and a meeting of the shareholders was called for the first week of May to discuss matters of administration and the issuing of bank notes for the central government for general circulation. This organization, says the China Critic, was formerly called the Bank of the Board of Finance and the business for 1907 was highly satisfactory.

Hongkong Registered Companies.—According to the report of the Supreme Court of Hongkong the total number of companies registered since 1865, the date of the promulgation of the Companies Ordinance to the end of 1907, was 530, representing an aggregate capital of \$245,155,803.00. Of the 530 companies on the register, 94 are defunct, 2 were not floated; 120 were wound up and 52 were in the course of liquidation leaving 262 on the register at the end of the year and representing a capital of \$163,434,528.00. There were 29 companies registered in 1907.

Hongkong Supreme Court Report.—In the Division of Original Jurisdiction there were 261 cases filed during the year 1907; 162 pending at the commencement of the term; 143 disposed of; 39 settled or withdrawn and 280 undisposed of. The total amount involved was \$3,275,203.27. In the Probate and Administration Division there were 174 grants made by the court including Probates 82, and Letters of Administration, 92. The aggregate value of the estates amounted to \$12,675,740.00. Forty-two estates were administered during the year representing a value of \$24,560.78 and 22 estates were wound up as against 39 in 1906, value \$20,977.40. The total amount of Official Trusts in the hands of the Trustee at the end of the year was \$116,-215.47 and represented 27 trust estates.

CURRENT NEW YORK WHOLESALE PRICES OF METALS, MINERALS, CHEMICALS, ETC.

Selec'ed from the Engineering and M	fining Journal
ABRASIVES	U.S. Currency.
Bort, good drill quality carat Carborundum, grains lb Corundum "Emery, grain "Pumice Stone, American powdered 100 lbs.	\$ 85 00 .10- 17 .0710 .035045
ACIDS —	
Hydrochloric 20° lb Nitric, 38° " Sulphuric, 66° bulk ton Aluminum, Sulphate Com'l lb Antimony, needle " Arsenic, white "	1.20-1.10
Asphaltum.— Trinidad	28.00-30.00 51.00-27.00 1.25-1.40 5.50 .022-04 .0450.525 7.50
CEMENT.— Portland, American 500 lbs. bbl Foreign "" Rosendale 300 "" *Green Island 875 "" *Alsen 875 "" *Rizal *Independencia	1.55-1.60 2.25-2.90 .85 2.65 2.75 2.50 2.50 2.50
CLAY, CHINA	
American commonlg. ton Foreign"	8 50-9.00 10.00-17.50
*Japanese *Australian Copper	5 25 5 50 .16½16½ .20 14 00 30.00-40 00 30.00-45.00 2 50 7 5)

Graphite-American ore, common_lo	.01-10
Artificiallbsh ton	7.00
Powderedsh.ton	12 to-20
Magnesite-Greece, crude, 90%_lg.ton_	8.00-10 (U
Bricks, domesper M	160-200
Manganese, pure, 98-99%lb	.06
Ore, 80-85%sh. ton	20.00 to 50.00
Mercury, export flask	36 00 39.00
PAINTS AND COLORS.—	
Litharge American P'w'dlb	.061061
Ochre, Am. Comsh. ton	8.50-9.00
Paris green, pure, bulklb Turpentine, spirits, bblgal	.412-45
White lead, Am. drylb	.059- 06
Am. in Oil	.061-063
Zinc, white, Am. extra dry	.05g- 05g
Phosphates, Acidper unit Florida hard rocklg. ton	10.25-10 50
Land peoble 68% "	5 25-5 50
Potassium Cyanide (98-99%lb	18-19
Platinumoz	27 00-29 50
Platinum, Scrapoz	20 00-21 00 053055
Spelterlblb	.015- 064
Cobalt unrefined"	.2045
*Powder, black blasting Alb	.14
*Judson"	130
Pyrite, Domestic Non-arsenical,	.11113
Imported non-arsenical lump"	.13- 134
Imported, arsenical ""	12-18
Saitpeter crude	4 50-5 00
Silica, Lump quartzlg. ton	5 00-6 00 13 00-15 00
Ground quartz. ordinary "	2 75
Silveroz	.619
Sodium cyanide (100% KCN)	.1819
*Steel, octagon drilllb	22 00
Sulphur, Louisiana primelg. ton Roll100 lbs	1.85-2.15
Flowers sublimed	2.20-2.50
Talc-Domesticsh. ton	15 00-25.00
Italian, best "	35 00-40.00
Tinlb	.42
Zinc, Dust	.05069
*Manila quotation.	

HEMP STATISTICS, 1st MAY, 1908.

(Courtesy of C. S. Nicholson, Secretary Manila Chamber of Commerce.)

Arrivals of hemp at Manila up 30th April 1908		238,437 Bales. 88,711 Bales.
Stocks on hand in Manila and Cebu on 1st January, 1908		327,148 Bales. 129,359 Bales.
TOTAL	and are Dalas	456,507 Eales.
Export to all ports to date 30-4-08	326,350 Bales. 1,600 "	327,950 Bales.
Total stocks at Manila and Cebu on 1st May, 1908		128,557 Bales.

EXPORT OF HEMP, APRIL, 1908.

D	ite	Vessel	London	L'pool	Atlantic U. S.	Pacific East California	Continent.	Australia	Other Pts.	Bales
Apı		Fwd:-	70,481	31,730	72,755	9,607	18,169	4,165	11,893	218,800
66	I	Friederike	23,685					*********	*********	23,685
44	4	Rubi	850	****	**********	************	100	**********	650	1,600
4.6		Loongsang						*********	50	300
4.6	8	Palma	2,152	4,690	***** *****	************	975	*****	*********	7,817
66	10	Zafiro	*******	*******		******	150	******	400	550
11	6.6	Kumano Maru	*******	*******	*********	***********	************	**********	605	605
64	II	Yuensang	********	*******	**********	******	**********	*********	100	
	44	Titan		*******	******	4,800	*********	*********	*******	4,800
- 66	13	Isla de Luzon		500		*********	25		*********	525
		Tean						**********	150	1,850
"	17	Wray Castle		*******	10,606	***********	*****	*********	**** ******	10,606
66	19	Rubi		******	******	***********	*******	*******	334	334
	LECTION STREET	Loongsang						NAME OF STREET OF STREET		
4.6	64	Inverclyde	********	********	6,683	***********	********	******	**********	6,683
	20	Jason Cebu.	5,038	1,875	*********	************	675	******	*********	7,588
		Nikko Maru								
6.6	24	Changsha		*******	***** *****	************	**********	- 90	********	90
		Zafiro								
		Yuensang								33
64	27	SenecaCebu.	*******	******	12,768	***********	***** *****	*********	********	12,768
er.	28	Prinz Waldemar	********	*******	2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	***********	**********	******	281	281
44	-	Eastern	********	*******	**********	***********	******	**********	224	224
41	4.6	Kaifong Cebu.	******	50	******	*******	******	******	*********	50
- 66	11	Jason	14,721	5,971	**********	********** **	1,905	******	*********	22,597
**	29	Jason Tean	1,650	********		***************************************	275	************	***********	1,925
			119.345	46,516	102,812	14,407	22,374	5.794	15,102	326,350

FAR EASTERN STOCKS AND QUOTATIONS

Courtesy of Messrs. Kadoorie & Co., Hongkong, for April, 1908.

STOCK.	WHEN ESTAB	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	WORKING	DATE	LAST DIVIDEND.	Approximate Yield per cent per annum atPrisent Sent Quotation.	CLOSING
BANKS.											
Hongkong & Shanghai Banking ((g £1,500,000)			(Final of £2 on old and £1-10[.)		(\$600 ·
Corporation	1865		120,000	\$125	\$125	\{\s\\ \\$13,500,000\}\\ i \\\ \\$250,000\}	\$2,000,387	31-12-07	Final of £2 on old and £1-10[-) on new shares for ½ year } ending 31-12-07	54	\$690 £73-10
National Bank of China, Ld	1891	£699,475	10) 99,925	£7	£6	c £12,735 (\$300,000)	\$71,293	31-12-06	\$2 (London 3 6) for 1903		\$51
MARINE INSURANCES.											
Canton Insurance Office, Ld	1881	\$2,500,000	10,000	\$250	\$50	{	Nil.	31-12-06	\$20 for 1906	81	\$240
North China Insurance Co., Ld	1963	£150,000	10,000	£15	£5	{		30-6-07	{ Final of 7[6, per share mak-} ing in all 15[- for 1906 (Tls. } 2.65)	6	Tls. 81 buyers
Union Ins. Society of Canton, Ld.	1867	\$3,100,000	12,400	\$250	\$100	ij £125,137.15	\$2,506,001	31-12-07	Final of \$15 making \$45 for \ 1906, and interim of \$30 for \ account 1907	51	\$797 ex div.
Yangtsze Ins. Association, Ld do. do. (new)	1862 1907	\$1,040,000	§ 8.000 4,000		\$60 \$60	\(\begin{array}{cccccccccccccccccccccccccccccccccccc	\$394,520	31-12-06	\$12 for year ending 31. 12. 05		\$165 \$150
FIRE INSURANCES.											
China Fire Ins. Co., Ld	1870	\$2,000,000	20,000	\$100	\$20	{ x \$1,000,000 } \$346,097 }	\$372,432	31-12-07	\$6 and bonus \$2 for 1906	9	\$90 sa. & b.
Hongkong Fire Ins. Co., Ld	1868	\$2,000,000	8,000	\$250	\$50	\$13,802 \ \$1,323,941			\$27 for 1906		\$310 sales
SHIPPING. China & Manila Steamship Co., Ld	1000	8770.000	** 00 000								
Douglas Steamship Co., Ld					\$25 \$50	\$7,000 \$264,638 (\$1.035 Nil.		\$1 for 1906 \$4 for year ended 30-6-07	10	
Hongkong, Canton & Macsol			heriotechine ja		600	(e \$250,000)					990
Steamboat Co., Ld	1865	\$1,200,000	80,000	\$15	\$15	d. i. \$575,000 \	\$16,437	31-12-07	\$1½ for 2nd half year making in (all \$2½ for year ending 31-12-07)	8 5	\$29 buyers
	1882	m £600,000	(2) 60,000 (2) 60,000	£5	£5	£60,000 { i £270,000 {	£3,694	31-12-06	5 - @ ex. 2-21 = \$2.24 per share for 1906	37	{ \$35 { \$24
Do. Do. (Deferred)) hanghai Tug & Lighter Co., Ld.	1903	Tls. 1,500,000	1 00 000 1	Tls. 50	Tls. 50			31-12-07	(Final of Tls. 12 making Tls. 31/	1 72	Ils. 45 buyers
Shell" Transport & Trading	1898	£ 2,000,000			£1	Tls. 75,000 { £400,000 }	£172,370		Second Interim of 11- (Coupon)	1 71 1	Ils. 49% buyers
Star" Ferry Co., Ld.	1898 1900	\$200,000	10.000		\$10 \$5	£1871 } \$65,000 } i \$32,957 }			No. 9, for alc 1907		
aku Tug & Lighter Co., Ld		Tls. 1,500,000	12) 30,000	Tls. 50	Tls. 50	Tls. 98,000 \\ d Tls. 419,479 \\ e Tls. 82,000 \\ i Tls. 81,200 \\	Tls. 18,730	31-12-06	Final of Tls. 2 making Tls. 6 for 1906.	124	Fls. 47 buyers
REFINERIES.						(q Tls. 30,000)					Lis. 11 Duyers
hina Sugar Refining Co., Ld	1878	\$2,000,000	20,000	\$100	\$100		Dr. \$279,371	31-12-07	\$8 for year ending 31-12-06	\$	\$135
uzon Sugar Refining Co., Ld Perak Sugar Cultivation Co., Ld.	1882	Tls. \$700,000 350,000	7,000 7,000	\$100 Tls. 50	\$100 Tls. 50	none Tls. 100,000	Dr. \$135,132 Tls. 8,935	31-12-07 31-8-06	\$3 for 1897 Tls. 4. (8%) for year ending	8	\$15 sales
									31-8-06	51/2	Ils. 70 sellers
hinese Engineering & Mining	1001	£1,000,000	1 000 000			(d £150,000)			(Final of 116 - Making 31- for)		
Co., Ld	1901	21,000,000	1,000,000	2.1	2.1	ld £150,000 } h £84,390 }	£11,556	28-2-07	(Final of 1 6 - Making 3 - for 1907 (Coupon No. 9)	(1)	Cls. 16.20 buye
taub Australian Gold Mining }	1892	£200,000 }	150,000 50,000	£1 £1	18-10 £1	£4,873	Dr. £11,358	31-3-07	No. 12 of 1 -=48 cents	\$	884
OCKS, WHARVES AND GODOWNS.											
enwick (Geo.), & Co., Ld		\$450,000		\$25	\$25	\$53,601 \$550,000)			\$12 for year ending 31-12-06	8	
Godown Co., Ld.	1886	\$3,000.000	f early first	\$50	\$50	\$26,806 \\ \bar{2} \\$40,000 \\ \bar{2}	\$3,556	31-12-07	Final of \$1\frac{1}{2} making \$3\frac{1}{2} for \\	62 \$	53
Co., Ld	1866	\$2,500 000 Tls. 5,570,000	50,000	\$50 Tla 100	\$50 Tls 100	\$50,000 }	\$441,442 Tls. 10,459		Final of \$4 making \$8 for 1907 Int. of Tls. 2½ for 6 months ending		3103
		Tls. 3,600,000				Tls. 1,000,000 b Tls. 697,257			31-10-1907	71/2	lls. 81 buyers lls. 224 buyers
ANDS, HOTELS AND BUILDINGS						r Tls. 75,000 (e Tls. 125,000)			l for 1907		Lis. 224 Duyers
nglo-French Land Investment)	1000	170 0 500 000	2) 05 000	TI- 100	77- 100	(TI) OF 600	771. 0.50.	00.0.00			
Co., Ld tor House Hotel Co., Ld	100000	Tls. 2,500,000 \$750 000	4) 30,000	Tls. 100 \$25	\$25	Tls. 25,000			Tls. 6 for year ending 29-2-08 \$2½ for year ending 30-6-07		ris. 100 21 buyers
stor House Hotel, Ld. (Tientsin) entral Stores, Ld		Tls. 200,000 \$751,845	4,000	Tls. 50	Tls. 50	Tls. 35,000 (e Tls. 10,000 (\$1,000	Tls. 1,013	28-2-06	20 per cent, for 1906	7	Cls. 70 sellers
	1866	\$600.000	12,000	\$50	\$50	\$648,975		AND REGISTER OF THE PARTY OF	\$4 for 1st half-year ending 30-6-		10 sales
longkong Land Investment &	1889	\$5,000,000	50.000	\$100	\$100	e \$250,000	\$36,915	31-12-07	1907. Final of \$3½ making \$7½ for { year ending 31-12-07	718	396 3100 sellers.
umphreys' Estate & Finance!	1887	\$1,500,000	150,000	\$10	\$10	i \$217,426 }	04 001	21 12 07	70 cents for 1907		310 buyers

FAR EASTERN STOCKS AND QUOTATIONS—(CONTINUED.)

STOCKS	WHEN ESTAB	CA	PITAL	NO, OF SHARES	VALUE	PAID UP	YRESERVE	WORKING	DATE	LAST DIVIDEND	Yield per cen per annum atP	CLOSING QUOTATIONS
Kowloon Land & Bldg. Co., Ld.	1889		\$300,000	6,000	\$50	\$30	none	\$65	3 31-12-07	\$1\dagger for 1907	63	\$26 buyers
Shanghai Land Investment Co., Ld	1888	Tls.	3,900,000	78,000	Tls. 50	Tls. 50	Tls. 1,523.045 e Tls. 170,000	Tls. 107,54	7 31-12-07	Final of Tls. 3 & bonus of Tls. 1 2 making in all Tls. 8 for 07.	7	Tls. 115 sellers
Tientsin Land Investment Co., Ld.	1902	Tls.	772,600			Tls. 100			1 31-12-07	Final of Tls. 3 making Tls. 6	61	Tls. 96 buyers
West Point Bldg. Co., Ld	1889		\$625,000	12,500	\$50	\$50	none	\$1,54	1 31-12-07	I Timel of 20 10 making in all 1	81	\$48 sales & b.
COTTON MILLS.												
Ewo Cotton Spinning & Weaving }	1895	Tls.	1.000.000	5) (20,000	Tls. 50	Tls. 50	Tls. 150,000	Tls. 8,80	7 31-10-07	Tls. 2½ for year ended 31-10-07	41	Tls. 56 buyers
Co., Ld	1901		1,250,000	125,000	\$10					50 cents for year ending 31-7-07		\$104
Weaving & Dyeing Co., Ld	1895			6) 10,000						Tls. 6 for year end. 30-9-06 (8%).		Tls. 55 sellers
turing Co., Ld										Tls. 8 for 1906		Tls. 75
ning & Weaving Co., Ld	1895 1895		800,000			Tls. 100 Tls. 500	Street, County Street, Belleville, Co.	Tls. 6,30 Tls. 50,66	3 31-12-06	Tls. 50 for 1906		Tls. 260 sellers
MISCELLANEOUS.												
Bell's Asbestos Eastern Agency, [1895	4	£5,377.10s	11) 8,604	12-6	12/6	£1,29	£63	8 31-12-06	1s. 3d. for 1906	9	8 71/2
Ld				8) 60,000					AND THE RESIDENCE OF TH	\$1.20 for 1907	11	\$11
China Light & Power Co., Ld Do. do. Special Shares			550,000	\$ 50,000 17)50,000	\$10 \$1	\$10 { \$1 }	none	\$25,00	0 28-2-07	60 cents for year ending 28-2-06		\$6
China Provident Loan & Mort-			1,250,000		\$10	\$10	\$120,00		3 31-12-07	80 cents for 1907	9	\$9 sales
Dairy Farm Co., Ld.	1896	1	\$187,500	25,000	871		i \$60,000 \$5,000	11 12 1	4 31-7-07	\$1.30 for year ending 31-7-07	Early Charles To Clark	\$20
Freen Island Cement Co., Ld		8	4,000,000	400,000	\$10					Interim div. of 50 cents per share for % 1907		\$11½ \$23
Hall & Holtz, Ld			\$420,000	21,000 60,000	\$20 \$10			\$15,00 \$2,95		\$1.00 for year ending 28-2-07		\$16 buyers
										Final of \$15 making in all \$19	A CONTRACTOR OF THE PARTY OF TH	\$225 sales
Hongkong Ice Co., Ld			\$125,000	50,000	\$25 \$10				1 31-12-07	Final of \$1.20 making in all \$2 7		
Maatschappij tot Mijn-, Bosch-) en Landbouwexploitatie in }		C.	2,500,000			Glds. 100	(T) = E47 E00			Interim of Tls. 10 for first quarter		\$30 Tls. 460 sellers
Langkat	1907	us.		4 25 000			none			(\$1 per share for period from) 1 19th Oct. to 30th April, 1907	1012	\$13 buyers
Do. (New) t	1904		\$750,000	1 50,000	\$10	The second secon		none		None		\$2 \$8
	1903	Tls.	800,000		Tls. [50			Tls. 6,60	3 31-12 07	Final of Tls. 4 making Tls. 71	7	Tls. 107½ buyer
Shanghai-Sumatra Tobacco Co., (1902	Tls.	600,000	9) 30,000	Tls. 20	Tls. 20	Tls. 24,820 w Tls. 75,000	Tls. 8,49	3 31-10-07	/ TU -1 -5 TU - 0 1: :11 +		Tis. 874 sellers
The sales Wetsamoules Co. I.d.	1001		0000 000	16 250	cor	£20		1	2 31-12-07	Final of 37 6 making in all 52 6		Tls. 360
Shanghai Waterworks Co., I.d South China Morning Post, Ld.			£327,000 \$150,000		£20			Dr. \$41 93	4 28-2-06	None		\$23 buyers
Steam Laundry Co., Ld	1902		\$100,000	20,000	\$5	\$5	none 1 Tls. 15,259	7	8 31-5-07	40 cents for year ending 30-5-07	01	\$6 sales
	1901		200,000				i e Tls. 4,000	Tls. 20		Tis. 6½ for year ending 30-4-07 50 cents for 1907	A THE WAY	Tls. 97 sellers
United Asbestos Oriental Agen-			\$100,000	15) 50,000 10,000	\$10 \$10				0 31-5-07	80 cts. on 9,900 ord. shares & 3		\$11
Cy, Ld	1000		2000 000	00.000	010	\$10	\$300,000		2 31-12-06	Interim of 30 cts. for % 1907	63	\$10 buyers
Watson (A. S.) & Co., Ld			\$900,000		\$10		1 420,000			10 per cent. for year endg. 31 7 07.		\$130 buyers
Weismann Limited William Powell, Ld	1904		\$17,500 \$150,000	15,000				\$1 \$4		{ Final of 30 cents making 80 } cents for year ending June }		\$5½
										(30th 1906)		
LOANS AND DEBENT	URES		AGE	NTS FOR T	HE AN	IOUNT OF	PAR VALUE	OUTSTANDING BONDS.		WHEN PAYABLE.		CLOSING QUOTATIONS.
China Government, 7 per cent	. Silv	er Lo	an)		(Tls. 767,20	0 Tls. 250	1914	Mar. 31	st and Sept. 30th each year unti	il	par.
Hongkong Hotel Company, Lt Mortgage Debentures of 1899				gkong&Sha	Millian Stranger	\$500,00	0 \$500	§ all	Half ye	lar. 31st, 1917 arly, June 30th and December 31s	t	par.
hanghai & Hongkew Wharf C	ompan	y, Lte	d., / 148	i Banking C	or-	Tls. 543,90	0 Tls. 100		Half ye	arly, June 30th and December 31st	Tls.	97 Plus
6 per cent. Debentures of 196 stor House Hotel Company cent. Debentures of 1903				oration.		Tls. 500,00				arly, January 1st and July 1st		par
chinese Engineering & Mining per cent. Debentures of 1903	Ť					£500,00	0 9	£431,96	0 Half ye	arly, June 30th and December 31st	g,	par.
nternational Cotton Manufactu 7% Debentures of 1901	ring (lo., Li	td.	and the second	Bank	Tls. 500,00		11	Half ve	early, March 31st and Sept. 30th	Tls.	971.
A CO. T. DEST SERVE STATE STATE AND A STATE OF THE STATE				APPROPRIES VINED 1	THE RESERVE AND THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS N				Control of the Contro			

a Authorized capital \$2,000,000.

n Sinking Fund.

b Building Reserve Account.

c Capital Reserve Fund.

d Depreciation Fund.

e Equalization of Dividend Fund. Exchange and Investment Fluctuation Account.

g Gold Reserve Fund

h Exchange Reserve Account.

i Insurance Fund.

Reinsurance Fund. Contingencies Account.

l Legal Reserve Fund.
m Authorized Capital

o Raw Sugar Reserve Account.

p Premium on New Issue.

q Boiler Repairs and Renewals Account r Repairs and Renewals Account.

s Silver Reserve Fund.

t Depreciation and Repairs Account u Underwriting Suspense Account.

v Special account

w Special Works Fund. x Extra Reserve Fund.

y 72,560 owned by the Company. z 7,200 shares unissued.

^{5,725} shares unissued.

² First issue of 60,000 of 10,411 unallotted.

^{3 5,000} shares unissued.

^{4 4,480} shares unissued.

^{5 5,000} shares unallotted. 6 1,616 shares unallotted. 75,000 shares unissued.

^{8 14,000} shares unissued.

^{9 17,000} shares unissued.

^{10 40,453} shares actually issued. 11 7,688 shares actually issued. 12 4,200 shares unissued.

^{13 500} shares unissued. 14 198 shares unissued. 15 22,250 shares unissued.

^{16 10,000} shares unissued.

17 Special shares are entitled to half of the profits.

¹⁸ Capital contributed by Chinese Gov-

ernment. Kuping Tls. 5,000,000.

^{*} Based on last year's dividend.

^{**} Based on present dividend.

^{||} Only Tls. 134,000 taken up. 216 held by the Company.

In certificates of £20 and £100.

Redeemable in 10 years, or at option of Company, the Company giving 6 months notice.

Redeemable at par at rate of £10,000 per annum from 31st December 1903 to 31st December 1952.
*** Redeemable at par on 30th June, 1915.

Dr. Deficit.

ADDITIONAL SHANGHAI SHARE QUOTATIONS

STOCK	CLOSING QUOTATIONS	HIGHEST AND LOWEST PRICES DURING THE WEEK		PITAL	NO. OF SHARES	VA	LUE	PAI	O UP	RESERV	7 E	LAST DIVIDEND	WHI	EN P	AID
Oriental Consolidated Mining Co. Ltd	27s. 6d.		G. \$8	5,000,000	500,000	G.	\$10	G.	\$10	none		Gold cents Sixty for year ended 30th June 1907	Dec.		1907
Limited	\$1 nominal			\$700,000	35,000		\$20		\$20			None			
Vulcan Iron Works, Limited Yangtsze Wharf & Godown Co.	Tls. 400		Tis.	500,000	5,000 1,000	100	100 7	200 1747	50 500	Ξ		First year	Nov.	- 1,	1906
Limited	Tls. 208 sales		Tls.	250,000	2,500	Tis.	100	rls.	100	Tls.	50,000	Tls. 18 for 1907	April	16,	1908
Co. Limited	Tls. 10 nominal		Tls.	91,850	3,674	Tls.	25	rls.	25				274	120	
Grand Hotel, Limited	Y. 100 sellers		Y. 1 Y.	500,000	10,000 5,000	1.00	100		100			First year Interim Y, 5 for ½ year	Dec.	- 31,	1907
Kalee, Limited Tsingtau Hotel Company, Ltd,	Tls. 9 sellers \$100 nominal nominal			\$100,000 \$250,000	9,000 4,000 2,500		12½ \$100 \$100	rls.	12½ \$100 \$100	Tls.	29,783	Final of 6% making 10% for 1905 \$3 for 1906	May	22,	1:07
Butler Tile Works, Limited Major Bros, Limited Oriental Ice Company, Limited Scharffs Oil and Bone Mills, Ltd . Shanghai Ice Company, Limited. Shanghai Oil Co., Limited Campbell, Moore & Fo., Limited Dunning & Company, Limited J. Llewellyn & Co., Limited Lane, Crawford & Company Mondon (E. L.) Limited S. Moutrie & Company, Limited	Tis. 50 nominal Tis. 40 sellers Tis. 50 Tis. 50 Tis. 50 Tis. 13 sales Tis. 25 \$10 buyers \$50 sellers \$50 buyers \$137½ sales Tis. 6 buyers \$40 buyers	1371/2	Tis. Tis. Tis. Tis. Tis. Tis.	\$100,000 60,000 300,000 1-0,000 200,000 200,000 \$12,000 \$12,000 \$72,000 \$72,000 \$250,000 \$250,000 \$250,000	4,000 6,000 2,600 4,000 7,000 1,200 2,000 1,200 2,500 9,000 5,000	Tis. Tis. Tis. Tis. Tis. Tis.	\$100 50 50 50 50 50 25 25 25 310 \$60 \$100 \$50 \$50 \$50	Cls. Cls. Cls.	\$100 50 50 50 50 \$100 \$60 \$100 25 \$50	none	\$9,000	\$7 for 1907	Mar. Apr. Apr. May	29, - 14, - 2, 15, 16,	1907 1908 1908 1907
Weeks & Company, Limited Dominion Rubber Co., Limited.	Tls. 4		Tls.	\$400,000 225,000	20,000	Tls.	10 7		\$20		\$20,000	to 28 2.08	Dec.	11, 	1907
Kalumpong Rubber Co, Ltd Senawang Rubber Estates Company, Limited Senawang Rubber Estates Company, New Tebong Rubber and Tapioca Es-	Tls. 100 Tls. 75		Tis.	700,000	14,000	-	50 T	rls.	100	** Tls. 1	1,844.48				
Eastern Fibre Co., Limited Shanghai Mercury, Limited	Tls. 10 nominal Tls. 50 buyers		Tls. Tls.	£76,000 300,000 105,500	76,000 30,000 2,100	Tls.	£1 10 7 50 7		£1 10 50			4% for hulf year ended 31 Oct. 1907.	Dec.		1907
Shanghai Mutual Telephone Co.,		531/2	Tls.	675,000	13,500	Tls.	50 7	Ms.	50			Tls. 4 for 1906			
China Export Import & Lumber Company, Limited China Printing Co., Limited Dallas Horse Repository Co., Ltd.	Tls. 92½ nominal Tls. 50 Tls. 25 nominal		Tis. Tis. Tis.	350,000 750,000 250,000	500 1,500 5,000	Tls.	100 T 50 T	ls.	50 50 50			10 p. c. for year ending 20,2.07 80 cents for 1907	Jan.	30,	1908
Hirano Mineral Water Co., Ltd.			Y.	7.25,000	5,000	Y.	25 3	7.	25			10%=yen 2½ for year ending 1 30th Sept. 07	Nov.	21,	1907
E. E. Porter & Co., Limited Shanghai Electric & Asbestos Company, Limited Shanghai Electric Construction	\$23 sales			\$100,000 \$125,000	2,000 5,000		\$50 \$25		\$50 \$25			Interim of 4% for 1907			
Company, Limited	£11 buyers	£11	3	£300,000	30,000		£10		£10			First year			

DEBENTURES

Shanghai Municipal Debentures 1892 Tis. 87 Tis. 50,00	WHEN PAYABLE	INTEREST	OF 1	RATI	VALUE	NOMINAL	NDING	UTSTA	OF LOAN	AMOUNT	-PLUS INTEREST		A	LOANS
do	June & Dec.	07	5		100	Tls	45,400	ls.	50.000	Tls	87	Tls.		anghai Municipal Debentures
1894 100	Do	76	51/			14	A STATE OF THE PARTY OF THE PAR	64			92		0.6	
do	Du		6 2			- 64	The second second	4.6			100			
do	Do	31	5			14		15			'87			
Second 1887		"	5			4.	Committee of the Commit	14	140 000		87		7	
Section Sect	Do Do	"	5	1		4.		14	268 800	"	87			
do	Do	11	0	To Ha		14		44	300,000	,,,	100		- 1	
do	7.0	11	0			- 11			92 000	**	00	3.9		
do	Do	33	0/2				and the second s			9.1	100		and the second	
do	Do	**	0	1000				14	The little control of the little of the litt	- 11	100	33		
do	Do	.11	0				1 mm - m - m			2.5	100			
1905	Do	1,	6						4: 0.000	1.5	100	22		[2] [1] [2] [1] [1] [1] [2] [2] [2] [3] [3] [4] [4] [4] [4] [4] [4] [4] [4] [4] [4
hinese Imperial Government Loan 1886 E 250 767,200 351,400 250,000 100 6 6 767,200 351,400 351	Do	11	6				and the second s		214,500	11	100	1		
hinese Imperial Government Loan	Do	7,	6			**	THE PROPERTY OF THE PARTY OF TH	*	Committee of the second	11				do 190
1892 92 7250,000 250,000 100 62 7250,000 100 65	Mar. & Sept.	11	7			44	The state of the s	14	767,200	15	250	17		ninese Imperial Government Loan 1886 F
Second Color	May. & Nov.		6			**	250,000	*	250,000	37	99	11	A	langhai Land Investment Co. Debentures
Second Color	June & Dec.		51/2		100	44	250,000		250,000	11	92	11		do 1899
do	Mar. & Sept.		6	100		44		.6	250,000	11	99		4	do 1894
do 1900 1901 1909 250,000 1250,000 100 6 100 6 100	June & Dec.	THE RESERVE OF THE RE	5			44	A CONTRACTOR OF THE PARTY OF TH	14	250,000		87		A	do 1896
do 1901 99 250,000 250,000 100 6 100 100 6 100 100 100 6 100 1	April & Oct.		6	-		64		14	250.000 -		99			do 1900
1901 1902 1903 1904 100,000 100,000 100	June & Dec.		6			- 11		11	The state of the s		99			
do 1902 99	May & Nov.	"	5			64	The second secon	14			92			
hanghai Waterworks Co. Debentures		**	d			14		16			99		4	
hanghai Waterworks Co. Debentures	June & Dec.	19	e ·				The state of the s	16	The second secon	**	99			
do	Mar & Cont	13	0				The state of the s	4	CO. T. SELVER PROPERTY AND ADDRESS OF THE PARTY OF THE PA	11	00			enchei Waterworks Co Dobentures 180
do	Mar. & Sept	19	0				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		and the last of th	14	97	With the same of t	To the second se	에서 10 HM 등에 가게 되었다면 되었다면 보고 있는데 보고 있는데 보고 있는데 보고 있는데 되었다면 되었다. [10] [10] [10] [10] [10] [10] [10] [10]
do	June & Dec.	11.1	Đ				1.1111 Y 2.312 A BUSS 903 HI HIS YOR	4	50,000	11	STATE OF THE PARTY	11		:
do	Do	**	6				The state of the s	TEMPES	000,000	27	99	2.9		
Company Comp	Mar. & Sept.	13	6				AND THE RESERVE OF THE PARTY OF			**	99	11		
Serak Sugar Cultivation Co. Debentures	Do	11	6							1.0	99	19		
hanghai Gas Co. Debentures	June & Dec.	"	6			Marian Carlos	A DESCRIPTION OF THE PARTY OF T		the second of th	**	at the first terms of the second			지하는 이 사람들은 사람들이 가는 이 사람들이 되었다. 나는 이 사람들이 되었다면 보다 하는 것이 되었다면 보다 하는데 되었다면 되었다면 되었다면 하는데 되었다면 되었다면 되었다면 되었다면 되었다면 하는데 되었다면 되었다면 되었다면 되었다면 되었다면 되었다면 되었다면 되었다면
do	April & Oct	11	7		100	44	CONTRACTOR OF THE PROPERTY OF		A STATE OF THE STA	22	100	.,		[15] CHEST MINING A PHONE MANUAL MAN
1899 1900	Do		5			- 64	100,000	4	A SAN CONTRACTOR OF THE CONTRA	11	87	11		[2] 사이는 경에 있는 [1] 사이는 마른 사이는 다른 사이는 다른 사이는 다른 사이는 사이를 받는 것이다. 그는 사이는 사이는 사이는 사이는 사이는 사이는 사이는 사이를 받는 것이다.
hangbai and Hongkew Wharf Co. Debentures	May & Nov.		6		100	. 14	100,000	11	,000,000	,,	99	- 11		
hangbai and Hongkew Wharf Co. Debentures	June & Dec.		6		100	- 11	200,000	1	,000 000	11	99	17		do 1900
stor House Co. Debentures	Do		6			- 44	THE CONTRACTOR OF STREET, STRE	16	PLACE TRANSPORT AND RESIDENCE OF THE PERSON NAMED IN COLUMN TWO		99			anghai and Hongkew Wharf Co. Debentures 1902
ritish Municipal Council, Hankow	Do		7	1500			THE RESERVE OF THE PARTY OF THE		The Control of the Co		100			stor House Co. Debentures
hanghai Club Debentures	June & Dec.		7	FENSE.		44	THE ROLL THROUGH THE STATE OF THE STATE OF	ow Ti	CARD OF STREET PROPERTY AND ADDRESS OF STREET	H'kow T	A CONTRACTOR OF THE PROPERTY O		8	itish Municipal Council, Hankow
ountry Club Debentures	Do Doc.		6		100	44	THE RESERVE AND THE PERSON NAMED IN				ACC. 100			anghai Club Debentures
	Do		5	THE	100		AND THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS			4.450	97			untry Club Debentures
1907 97 92,000 " 92,000 " 92,000 "	Do	11	e e		100			16	THE RESERVE OF THE PARTY OF THE	99	07			SECION SECUENTIAL INCOME CONTROL CO
1907 97 92,000 100 6 100 6 100 7 100 7 100 7 100 7	Mar. & Sept.	11	0						THE PROPERTY OF THE PERSON OF	11				ne Crewford & Co Debentures

SINGAPORE SHARE QUOTATIONS

(COURTESY MESSRS. FRASER & Co., BROKERS, SINGAPORE, APRIL, 1908)

For- nation	Capital	Capital paid up	No. of Shares Issued	Issue Value	Paid up	Reserve	Last Dividend	Name	Buyers	Sellers	Closing Quotations
								MINING			
1903 1907	\$300,000 \$300,000	300,000 225,000	30,000 22,500y	10 10	10 10 10		그 나는 아이를 살아보지 않는데 얼마를 하는데 살아보다 하는데 얼마를 하는데	Belat Tin Mining Co., Ltd	7.00	7.25 7.50	7.00
901	\$600,000 £400,000	600,000 350,000	60,000 350,000a	10	1		20% for year ending 30-4-07	Bruang Ltd	11.00	2.00	11.00
907	\$400,000 £60,000	375,000 60,000	37,500b 60,000	10	10		2f- during 1907	Kanaboi, Ltd	10.75	4.00	7.00 7.00 11.00 1.95 4.00 10.75 6.00 10.50 7.50 14/6
906	£100,000 \$150,000	100,000	100,000 9,900c	10	10	6,000	25% interim for 1907	Kledang Tin Mining Co., Ltd	6.00	11.00 6.25 10.50	6.00
906	£120,000 £30,000	120,000 30,000	120,000	1 1	1			Lahat Mines Ltd	7.50	7.75 14/6	7.50 14/6
906	\$450,000	337,500	45,000 1600,000h	10 51-	7.50			Malacca Tin Dredging Co., Ltd	31/3	32f-	7.50 31/3
906	£250,000 £100,000	179,500 80,000	100,000 80 000j*	1	1			" " 7% Pref		****	nominal.
904 907	£120,000	100,000	100,000d 30,000h*	10	1	6,000	45% for year ending 30-6-07	Pengkalen, Ltd	7.25 5.25	7.50 5.75	5.25 10.00
905	\$450,000 £27,000	21,750	21,750e	1	1	A 072	1f- interim, during 1907	· · · · · · · · · · · · · · · · · · ·	9.75	10.15	9.00
892	£200,000	191,250 }	50,000 150,000	1	18/10	4,873	1f- paid January 1901	" Contributory	6.50	6.60	6.50 3.50
905 898	£40,000 Gs2 500,000	2,500,000	40,000 25,000	100	100		71% for year ending 31-12-07	Redhills Tin Mining Co., Ltd		3.75	890.00
900 907	\$110,000 \$500,000	110,000 500,000	22,000 50,000	10	7.50		10% for 1907	Royal Johore Tin Mining Co., Ltd	8.25	1.00 8.50	0.75 8.25
907 906	£80,000 \$850,000	80,000 850,000	80,000 85,000	10	10	25,000	7½% interim for 1908	Sempam Tin Mines, Ltd Serendah Hydraulic Tin Ming Co. Ltd		5.00 9.50	5.00 9.25 5.25 9.50
899 907	\$230,000 £90,000	230,000	23.000 70,000z	10	10		5% for ½ year ending 30-6-06	Sipiau Tin Co., Ltd	5.25 9.50	5.60 10.00	5.25 9.50
902	£160,000 \$60,000	149,185	149.185f 600	100	100		5f- during 1907		13.75	14.00 20.00	14.00 20.00
										20,00	
			1 40 *00-				1007 intenim for 1007	Angle Meley Dub Co. T.t.d. Felloward			£3 10s. 0d.
005	£150,000	116,625	46,500g 93,500	1	15/-	*******	10% interim for 1907	" " Contributory		10.50	£3 5a. 0d. \$19.50
05	\$200,000	105.000	10,500g* 7,000i	10	10		12½% interim for 1907	Balgownie Rub. Estate Ltd. Batu Caves Rub. Co., Ltd. Fully paid		19.50	£3 0s. 0d.
03	£30,000 £70,000	15,250 } 61,000	11,000 61,000j	1	15 <i>f</i> -		10% interim for 1907	Bukit Rajah Rubber Co., Ltd			£2. 10s. 0d £4. 5s. 0d.
006	\$150,000	125,000	12,500k 6,000	10	10	*******	15% interim for 1907	Castlewood Rubber Co., Ltd		10.00	10.00 £4. 10s. 0c
04 05	£12,000 £75,000	10,500 }	6,000 55,000 <i>î</i>	1	15/-		15% interim for 1907 10% for year ending 31-12-06	Consolidated Malay Rub, Estates, Ltd.	-	2.10.0	£5 0s. 0d. £2 10s. 0d.
06	£310,000	243,227	§ 181,454m	1	i		5% interim for 1907	Highlands & Lowds. Para Rub. Co., Ltd	1.15.6	1.18-6	£2 18s. 6d.
06			123,546	1	10f-		3% interim for 1907	Kuala Lumpur Rubber Co., Ltd.	1.2.6	1.5.0 1.3.6	£1 5s. 0d. £1 2s. 6d.
07	£180,000 £320,000	201,500	180,000 184,000d*	1	1		}	Lanadron Rubber Estates, Ltd		10/6	nominal 10/6
00			70,000	250	5f- 250			Langen Rub. and Cocoanut Co., Ltd			250 212.50
06	Gs 175,000	157,750	{ 460 160	250 250 10 2f-	212.50 250			Tallem Dalle C. Tal		212.50	250 10.00
95	\$250,000 £100,000	76,100	22,500n 900,000e*	2f-	10 2f-		10% interim for 1907	Ledbury Rubber Co., Ltd Linggi Plantations Ltd., Ordinary	9/6	10.00	10/6
	21(10,000	(0,100)	10,000	1	1 1		7½% for year ending 31-12-07	Malacca Rubber Plantations 7½% Pref	19/6	21/-	£1 0s. 0d.
006	£300,000	260,625 {	140,000 45,000	1	1 2f6			" Ordinary Contributory Contributory		10/6	10/6 nominal.
003	£30,000 \$250,000	20,000 225,000	20,000 <i>o</i> 22,500 <i>b</i> *	10	10		35% for year ending 31-12-07	Pataling Rubber Estates Synd. Ltd		10.00	£5. 10s. 0d 10.00
04	£20,000	8,794	2,588a* 12,412	1	10/-			Sagga Rubber Company Limited	=		£2. 10s. 0d
04	\$100,000	99,000	990k*	100 2/- 2/-	100 2f-		15% for year ending 31-1-08	Sandycroft Rubber Co., Ltd		275.00	\$275.00 14f-
03	£30,000 \$250,000	28,150 250,000	2,500	2/-	1/- 100			Singapore & Johore Rub. Co., Ltd.	100.00	115.00	nominal.
05	\$100,000	100,000	10,000 73,500	100	100		7½% for year ending 30/6/07	Sione Rubber Co., Ltd		13.00	13.00 nominal.
06	£100,000	93,357	26,500	į	15/			" " Contributory	RUG		£2 1s. Od. £2. Os. Od.
04	£50,000	28,795	35,000	1	12/-6		25% interim for 1907	Sungei Way (Selangor) Rub. Co., Ltd		1.10.0	£1. 10s. 0d
04	£60,000	50,000	500,000q	2f-	2f-		20% Interim for 1907	Vallambrosa Rubber Co., Ltd		12/-	
94	£5,377.10.0	4,805	7,688c*	12/6	12/6	1,300	10% for year ending 31-12-06	GENERAL Bells Asbestos Eastern Agency, Ltd	5.00	6.50	5.00
98	\$225,000	225,000	4,500	50	50	132,500 15,000,000t	15% & 2½% bon. for yr. end. 31-12-07. \$\ell \pm 22-0-0 \text{ on old and } \pm 1 \text{ 10s 0d on new}\$	Fraser & Neave, Ltd	132.50	135.00	132.50
65	\$15,000,000	15,000,000	120,000	125	125 }	13,500,000u 250,000v	shares for year ending 31-12-07	Hongkong & Shanghai Bank'g Corpt'n	1		£73 10s. 0d
05	\$2,400,000	2,400,000	{ 18,000 6,000	100 100		75,000	7½% for year ending 31-10-07 7% for year ending 31-10-07	Howarth Erskine, Ltd	130.00	142.50	142.50 120.00
	\$1,000,000	1,000,000 }	6,000	100 100	100 100	600,000	10% for year ending 31-12-07	Katz Brothers, Ltd. Deferred			130.00 150.00 nomir
01	\$34,000	34,000	3,400	10	10	175,000	20% for year ending 31-10-07	Maynard & Co Ltd	19.00 102.50	20.00	20.00
99	\$875,000	875,000	6.000 2,750	100	100	175,000	5% for year ending 31/12/07	Singapore Cold Storage Co. Ltd.	110.00		110.00 6.25
03	\$600,000 \$30,000	240,000 30,000	24,000r 600	10 50	10 50	20,000	10% for year ending 31-7-07	Singapore Cold Storage Co., Ltd	40.00	6.50	42.50
03	£400,000 \$160,000	400,000	400,000	100	100	11.200	5% for year ending 30/6/07	Singapore Electric Tramways, Co., Ltd. Straits Engineering Syndicate Ltd		55.00	6 <i>j</i> - 55.00
34	\$200,000	200,000	2,000	100.	100	35,000 400,000	10% during 1907	Straits Ice Co., Ltd		195.00	130.00
	\$500,000	500,000	5,000i* 1 2,535s	100		458,925w	, 10 /0 101 3 0 11 11 11 11 11 11 11 11 11 11 11 11 1	Straits Tobacco Factory, Ltd		2.50	2.50
)4	\$40,000	\$35,350	2,535s	10 10	10	1,150,000	10%&5% bon. ½ yr. end. 30-9-07	" " "	40.95	50.00	nominal.
37	\$3,000,000	3,000,000	300,000	10	10 }	1,193,659y		Straits Trading Co., Ltd	49.25	50.00	49.25
	000 unissued		m 5,000 n 2,500		i.		z 20,000 unissued. a* 5,000	DEBENTURES COO COO			0.01
5,	500 " 100 " 000 "		o 10,000 p 8,080	16			b* 2,500 " c* 916 "	Howarth Erskine, Ltd. 5%\$ 600,000 Riley, Hargreaves & Co., Ld. 6%.225,000		3%	3% prem.
5.	250 "		q 100,000				d* 66,000 " e* 239,000 "	Singapore Electric Tramways, Co., Ltd. 5%			nominal
10,	815 "		7 36,000 8 465				f* 480 "	Singapore Municipal 6%			20% prem. 3% prem.
100,0	000 " O 500 " P	rd. ref.	u Silver R			10	% 9.500 " % 15,000 "	" 4½%		5%	5% prem. 2% dis. no
12,0	000 " 000 " 500 "		w Insurance w Sundry	Reserves.			i* 44 i* 20,000 "	Straits Engineering Synd, Ltd. 6%. 45,000 Tanjong Pagar Dock Board 6% 250,000	-		par. 3% prem.
1	500 "		y 7,500 un				k* 10	5%1,050,000			1% prem.

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YOKOHAMA SHARE QUOTATIONS

COURTESY A. C. HUTTON POTTS, SHARE AND GENERAL BROKER, YOKOHAMA, APRIL, 1908

STOCKS	CAPITAL.	NO. OF SHARES	ISSUE VALUE	AMOUNT PAID UP	RESERVE	AT WORKING AC- COUNT OR CAR- RIED FORWARD	DATE	LAST	FOR TERM	CLOSING
Brett & Co., Ltd Club Hotel, Ltd Grand Hotel, Ltd Helm Bros., Ltd Langfeldt & Co., Ltd C. Nickel & Co., Ltd Yokohama Engine and Iron Works Oriental Hotel, Ltd., Ordinary	185,000 500,000 186,000 150,000 500,000 500,000	2800 1850 5000 3720 1500 20000 10000 3000	-Y- 10 100 100 50 100 25 50	-Y-10 100 100 50 100 25 50 50	3,000 10,000 25,000 50,000	-Y- 943.52 -Y- 8,762.67 -Y- 1,682.93 Dr. 14,115.95 1,729.20 -Y- 12,477.04	31-12-06 31-3-07 31-12-07 31-12-07 31-12-07 31-10-07 31-5-07 31-8-06	8% 10% 5% 20% 10% 15%	for 1 year	I was a second of the second o
Oriental Hotel Ltd., Preference	250,000	2000 10000	50 100	50 100	62,285.42 3,259,65	1,774.45	30-9-07	8% 7%	for 1 year 9 mos.	50 Nominal.

† 285,000 unissued. ‡ 475,000 unissued. *-Y-390,000 issued. 110,000 unissued.

DEBENTURE LOANS	AMOUNT OF LOAN.	FACE VALUE OF DEBENTURES.	RATE OF INTEREST.	INTEREST PAYABLE,	CLOSING QUOTATION.
Brett & Company, Limited	11,500.00 250,000.00 50,000.00 250,000.00 250,000.00	100.00 100.00 100.00 100.00	7% 7% 8% 6%	1 June and 1 Dec. 30 June and 31 Dec. 1 May and 1 Nov. 1 April and 1 Oct. 30 June and 31 Dec.	95 Sales. 100 Sales. 110 Sellers. 100 Sellers. 100 Sellers.

JAPANESE STOCKS.	FACE VALUE.	AMOUNT PAID UP.	LAST	DIVIDEND PAYABLE.	CLOSING QUOTATION.
Bonds & Debentures.					
Exchequer Bonds 1st issue	-Y-100	-Y-100	50%	June and Dec.	-Y- 99.40
Exchequer Bonds 2nd issue		100	5%	March and Sept.	92.10
Exchequer Bonds 3rd issue		100	5%	March and Sept.	,, 92,10
onsolidated Bonds (Seiri)		100	5%	June and Dec.	., 81.90
Var Bonds (Gunji)	The state of the s	100	5%	June and Dec.	., 81.90
pperial 5% Bonds		100	5%	March and Sept.	79.40
pecial 5% Bonds (issued 1906)		100	5%	June and Dec.	., 82.30
okohama Water Works Bonds		100	6%	June and Dec.	,, 95.50
okohama City Public Loan Bonds		100	6%	March and Sept.	,, 93.80
saka Harbour Bonds	100	100	6%	June and Dec.	,, 91.50
saka City Public Loan Bonds	100	100	6%	June and Dec.	,, 93.50
awasaki Dock Yards Co.'s Debentures	100	100	7%	June and Dec.	,, 96.00
kyo Race Associations"	500	500	30%	June and Dec.	., 650.00
Railways & Electric Trams.					
okyo Railway Company Limited	50	50	8%	June and Dec.	,, 59.00
okohama Electric Tramway Company, Limited	50	50	6%	July and Jan.	,, 38.00
eihin Electric Tramway Company. Limited	50	50	13%	June and Dec.	, 66.50 , 25.00
outhern Manchurian Railway Co., Ltd.	100	20	6%	June and Dec.	,, 25.00
anshin Electric Tramway Co., Ltd	50	50	12%	May and Nov.	91.50
Cotton Spinnings.					
anegafuchi Cotton Spinning Company, Limited	50	50	22%	July and Jan.	,, 76.95
iii Gassed-Yarn Company, Limited	50	50	25%	July and Jan.	73.90
okyo Cotton Spinning Company, Limited	50	50	18%	July and Jan.	,, 38.50
poerial Hemp Weaving Company, Limited	50	50	12%	July and Jan.	,, 53.50
isshin Boseki Kabushiki Kaisha	50	121			7.45
Sugar & Beer Cos.					
ai-nippon Sugar Refinery Company, Limited	50	50	171%	May and Nov.	, 71.60
ai-nippon Sugar Refinery Company, Limitednsuiko Sugar Refinery Company, Limited	50	12½	18%	June and Dec.	,, 15.50
ai-nippon Beer Company, Limited	50	50	15%	July and Jan.	,, 77.00
irin Brewery Company, Limited	50	50	8%	July and Jan.	., 63.00
Docks & Steamships.					40.00
okohama Dock Company, Limited	50	33	12%	June and Dec.	,, 48.00
raga Dock Company, Limited	50	50	10101	July and Jan.	11 7.00
awasaki Dockyard Company, Limited	50	50	121%	Feb. and Aug.	7.00 70.00 80.55
ippon Yusen Kaisha	50	50	12%	May and Nov.	94.00
okkaido Tanko S. S. Company, Limited	50	50	14%	July and Jan.	., 84.00
Miscellaneous					
okyo Electric Light Company, Limited	50	50	10%	June and Dec.	,, 65.00
okyo Gas Company, Limitedokohama Union Electric Light Company, Limited	50	50	15%	July and Jan.	,, 80.40 ,, 70.00
okohama Union Electric Light Company, Limited	50	50	15%	July and Jan.	" 10.00
nii Paper Mills	50	50	10%	June and Dec.	,, 44.00
tern Timber Company, Limited	50	50	15%	March and Sept.	,, 21.65
oden Petroleum Company, Limited	50	50	36%	April and Oct.	,, 114,00
akvo Rone Manufacturing Company, Limited	50	50	20%	June and Dec.	,, 93 00
pan Horse Improvement Company, Limited	50	50	15%	March and Sept.	,, 40.00
okyo Stock Exchange Company	50	50	1170	June and Dec.	, 102.00
saka Electric Light Company, Limited	50	50	10%	July and Jan.	,, 107.00
Kobe Electric Light Company, Limited	50	50	14%	July and Jan.	,, 85.00

BANGKOK QUOTATIONS

NAME.	BUYERS	SELLERS	QUOTATION	ESTABLISHED.	CAPITAL.	NO. OF SHARES.	VALUE.	AMOUNT PAID UP.	RESERVE FUND	LAST DIVIDEND	WHEN PAID OF PAYABLE.
Siam Electricity Co., Ltd	Tcs	Tes. 505	Tes. 505	1901	£ 300,000	30,300	£ 10	£ 300,000	Tes 418,174.31	12% & 121 T. bon. .6% & 2 Tel.	Feb. 29, 190
Pakuam Railway Co, Ltd	,, 200	,, -	,, 210	1893	Tes. 400,000	5,000	Tcs. 80	Tes. 400,000	,, 80,000 }	bonus for } }	Dec. 31, 190
Siam Tramway Co , Ltd	,, 160	,, 168	,, 168	1905	,, 1,450,000 }	6250 Shares 7250 Deb. 1000 P. Shares	,, 100	{ ,, 1,450,000		2%	Mar. 31, 190 Sept. 30, ,,
Meklong Railway Co , Ltd	,, 124	,, 128	,, 128	July 12, 1907	,, 2,230,000	22,300	,, 100	,, 2,230,000	17,316 22	21/2%	Dec. 31, 190
Bangkok Manufact. Co, Ltd	,, 145	,, 150	,, 150	1898	,, 400,000	4,000	,, 100	., 400,000		None	June 80, 190 Dec. 31, ,.
Howarth Erskine, Ltd	., -	,, -	,, 225	1905	\$ 2,400,000	24,000	\$ 100	\$ 2,400,000	\$ 40,000	71/6	Oct. 31, 190
Bangkok Dock Co., Ltd	,, -	.,,	,, 305	1865	Tes. 666,666	4,000	Tcs. 166	Tcs. 666,666	Tcs. 270,000 {	1 12½% & 2½ } Bonus	Dec. 31, 190
Siam Steam Packet Co	., -	,, 100	,, 100	1898	,, 131,250	2,625	,, 50	,, 131,250	1, 36,000	14%	Dec. 31, 190
Siam Commercial Bank	,, 1,300	,, 1,400	,, 1,400	1906	,, 3,000,000	3,000	., 1,000	,, 3,000,000	,, 140,000	21%	Sept. 30, 190
Menam Motor Boat Co	,, 150	,, 160	,, 160	1905	., 200,000	2,000	,, 100	,, 125,000		5%	July 31, 190
Jenderata Rubber Co	1, 65	,, 78	,, 73	1906	£ 40,000	4,000	£ 10	£3, per Share		None	
Langsuan Tin Mine Co		3/	4/	1905	£ 170,000	170,000	£ 1	£ 60,000			

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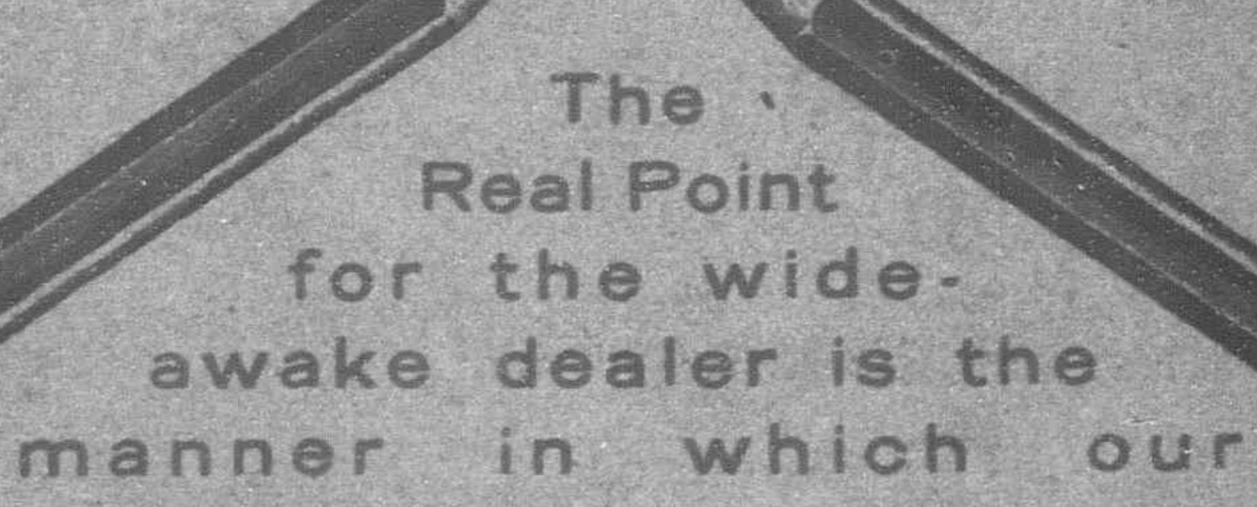
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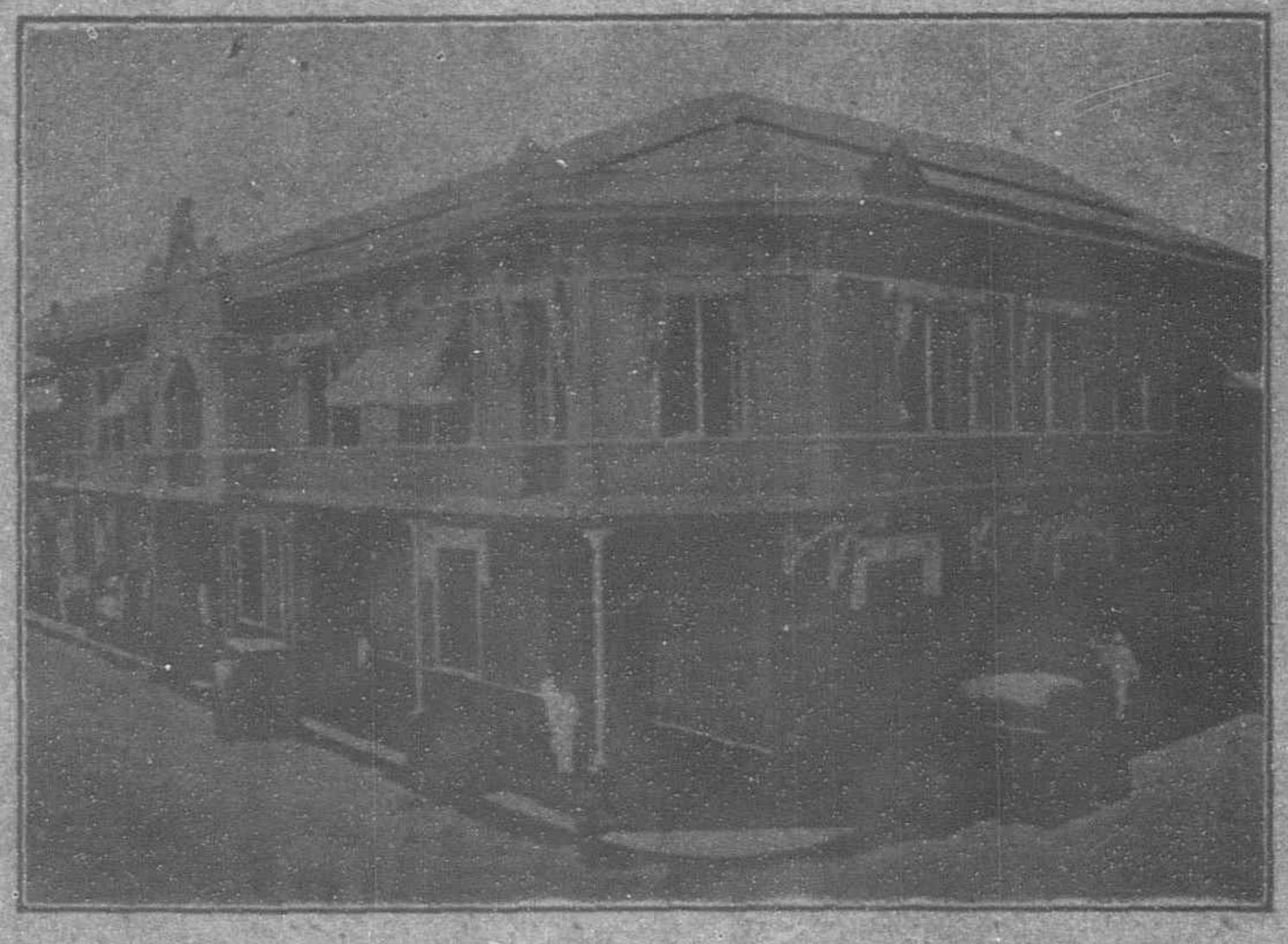
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